

APPENDIX C

INVENTORY OF DOCUMENTATION AND REFERENCE DOCUMENTS

Document List – Genovique

Not Dated	Closure Plan for Boiler Industrial Furnace (BIF) Units
Not Dated	Section 2 – Facility Description and Process Information
August 18, 1980	General Information Form
November 18, 1980	Part A Permit Application for Tenneco Chemical
January 21, 1983	Correspondence Regarding Part A Permit Application
January 26, 1983	General Information Form
February 3, 1983	Correspondence Regarding Change to Conditions of Operations During Interim Status
April 8, 1986	Correspondence Regarding Solid Waste Management Units
October 6, 1988	Correspondence Regarding Merger of Nordex and Huls
August 15, 1991	Hazardous Waste Permit Application Part A
November 4, 1991	Interim Status Questionnaire
June 9, 1994	Compliance Evaluation Inspection Report
August 25, 1994	Correspondence Regarding Variation in Normal Waste Management
December 14, 1994	Correspondence Regarding Velsicol Acquiring Huls
December 5, 1994	Correspondence Regarding Change of Ownership from Huls to Velsicol
March 21, 1995	Correspondence Regarding Omission on Notification of Hazardous Waste Activity Form
August 14, 1995	Trial Burn Observation Report
November 28, 1995	Correspondence Containing Facility Information for Site Visit
April 8, 1996	Correspondence Rejecting Recertification of Compliance
August 28, 1996	Correspondence Containing Site Visit Notes
January 15, 1997	Compliance Evaluation Inspection Report

August 5, 1997	Trip Report
October 16, 1997	Correspondence Regarding Compliance Evaluation Inspection
July 22, 1999	RCRA Compliance Evaluation Inspection Report/LDR Inspection
August 31, 1999	Report of Observations
January 19, 2001	Correspondence Requesting Part B Permit Application
May 1, 2001	Correspondence Regarding Deferral of Deadline for Part B Permit Application
May 24, 2001	Correspondence Regarding Deferral of Deadline for Part B Permit Application
August 19, 2002	Correspondence Regarding Closure Plan for Boiler Industrial Furnace (BIF) Units
October 10, 2002	Correspondence Opposing Closure Plan for Boiler Industrial Furnace (BIF) Units
October 25, 2002	Correspondence Regarding Public Hearing About Closure Plan of Boiler Industrial Furnace (BIF) Units
December 6, 2002	Correspondence Regarding Closure of BIF Units
December 20, 2002	Correspondence Regarding Closure of BIF Units
October 5, 2005	Source Water Assessment Report
September 10, 2007	Correspondence Regarding Permit Comments
August 9, 2007	Construction Permit
November 28, 2007	Velsicol Internal Meeting Minutes
August 5, 2008	Correspondence Regarding Cadmium Monitoring
December 2, 2008	Construction Permit
January 1, 2009	Operating Permit
November 9, 2009	Correspondence Regarding Operating Permit

Not Dated

Closure Plan for Boiler Industrial Furnace (BIF) Units

**Closure Plan
Boiler Industrial Furnace (BIF) Units
Velsicol Chemical Corporation
Chestertown, Maryland**

Purpose

The purpose of this plan is to identify the steps necessary to perform final closure of the BIF units as operating interim status facilities per 40 CFR 265 Subparts G and H. The units will continue to operate using comparable fuel as described in 40 CFR 261.4 (a)(16) or fuel oil #6 after closure as interim status facilities. This plan also provides a closure plan and cost estimate to cover our financial assurance requirements during interim status operations. A post-closure plan is not required because this is not a disposal facility and all wastes are being removed at closure.

Velsicol will maintain an on-site copy of the Closure Plan and all revisions to the plan until the certification of closure completeness has been submitted and accepted by the Administrator. The final closure date, for the purpose of this plan, is estimated to be the year 2002. Upon completion of final closure, Velsicol will submit to the Administrator a certification by both Velsicol and an independent registered professional engineer that the Hazardous Waste Facilities have been closed in accordance with the specification in the Closure Plan.

Scope

This plan describes the interim status facilities, and includes descriptions of how final closure of the facilities will be conducted. A detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment and structures is also included.

This plan was designed to ensure that the facility:

1. Will not require further maintenance and controls;
2. Minimizes or eliminates threats to human health and the environment; and
3. Avoids escape of hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition products to the ground or surface waters or to the atmosphere.

The areas in which all the Hazardous Waste is managed are paved and curbed/diked spill contained areas. The spill containment will remain in tact for the closure of the facilities. If there are any spills or leaks outside the containment as a result of the closure operation, any soil contaminated during the closure operation will be excavated, removed, and disposed of at a proper disposal facility.

Three closure options are described in this plan. The first option assumes implementation of the Comparable Fuels Exclusion (CFE) outlined in 40 CFR 261(a)(16) once the Maryland Department of the Environment adopts it. The second option assumes the CFE is not implemented and the waste is sent offsite (i.e., recycle or disposal). The third option covers our cost estimate for closure per 40 CFR 265.142, which is necessary to determine our financial assurance for closure obligation per 40 CFR 265.13. The example closure schedules for the first two options in this plan would come into effect after the BIF alternatives schedule.

Description of Interim Status Facilities

Velsicol operates four combustion units subject to the BIF regulations as described in Table 1.

Table 1

Unit No.	Description	Capacity (MMBtu/hr)
1	Eclipse Lookout Hot Oil System	10
2	Eclipse Lookout Hot Oil System	14
3	Eclipse Lookout Hot Oil System	14
4	Cleaver Brooks Boiler	10

During operation, the major fuel source is a hazardous waste fuel (liquid) referred to as waste light ends (WLE). This waste is a characteristic hazardous waste for ignitability (D001). These units have the capability of burning fuel oil # 6, but there is no capability for co-firing WLE and fuel oil. WLE is stored three tanks (324, 325 and 339). The WLE is constantly recirculated through its piping network to ensure proper mixing in the tanks. Final closure of the combustion units, tanks, ancillary piping and secondary containment will be described in this plan.

Certification

An independent registered professional engineer shall be employed to oversee the execution of the closure plan to verify conformance to its provisions. Upon completion of closure, the engineer shall jointly certify with Velsicol that the interim status BIF units closure was conducted in conformance with this plan.

Closure Option 1

If the CFE is implemented, comparable fuel will continue to be stored in the three tanks and tank 324 will continue to feed all of the combustion units. Comparable fuel will continue to be constantly recirculated through the piping network to ensure proper mixing in the tanks. The only change that will occur in the system as a result of closure will be management of the WLE.

WLE will be managed as a Comparable Fuel and will be subject only the CFE requirements. Velsicol will begin a 60 days burn down period of the existing WLE feedstock after implementation of the CFE. The WLE generated during the burn down period will meet the CFE. It will act as a diluent to flush out the tanks and auxiliary piping. During the burn down period, material in the system will be sampled at the inlet to the combustion units and analyzed for toluene. When the toluene concentration is less than the 36,000-mg/kg limit specified in the CFE, the combustion units, tanks, and ancillary piping will be considered clean closed.

After the burn down period is complete the secondary containment unit under the storage tanks will be decontaminated via pressure washing, steam cleaning or other equivalent method. Clean closure will be demonstrated when a sample of the wash water used to decontaminate the unit passes the ignitability test (i.e., Flash Point is above 140 ° F).

Closure Option 2

In the event we do not adopt the CFE nor pursue the Part B permit, the WLE will be shipped off-site for recycle/disposal. WLE will continue to be stored in the same tanks under less than 90 days accumulation requirements. The combustion units and ancillary piping (i.e., recirculation loop including the header that feeds the units) will be closed.

Velsicol will begin a burn down period to consume the remaining WLE inventory in tank 324 prior to the start of the closure process. Once the existing inventory of WLE is exhausted, the closure process will begin. Clean diesel fuel /fuel oil #2 will be off-loaded into tank 324 and used to fuel the combustion units. The diesel fuel will be constantly recirculated through the piping network to ensure adequate flushing of the pipelines. A sample of the diesel fuel (flush) will be collected from the inlet to the combustion units and analyzed for toluene. When the concentration of toluene is less than the 36,000-mg/kg limit specified in the CFE, the ancillary piping will be considered clean. The remaining clean fuel in the lines will be removed and the outlet flange of tank 324 will be equipped with a blank to prevent waste from entering the pipeline. A 24-hour burn out of each combustion unit will follow this. It will be accomplished by burning fuel oil #6. At the completion of the diesel flushing and burn out, the auxiliary piping and combustion units will be considered clean closed.

The tanks and secondary containment will not require closure, as they will continue to be operated under the 90 day accumulation requirements as previously noted above.

Closure Option 3

This option documents the closure plan for the existing interim status BIF. The closure cost estimate below will be used to determine the amount of financial assurance required for third party closure. The closure plan and cost estimate only covers the interim status BIF units, which consists of the four combusters and the ancillary piping (i.e., recirculation loop including the header that feeds the units).

After the last receipt of WLE to the BIF units, the recirculation loop will be disconnected at the inlet and outlet flanges to tank 324. The piping will be connected to a temporary tank so that diesel can be pumped through the recirculation loop. Diesel will be burned in the combustors for at least 24 hours each. The recirculation loop will be cleared of diesel when the burn out period is complete.

At the end of the burn out period a sample of diesel from the return pipe will be collected. The recirculation loop will be considered free of hazardous waste when the toluene concentration is less than the 36,000-mg/kg limit specified in the CFE.

This option assumes that one of the plant maintenance mechanic's and the DCS System Administrator will be hired to do the piping work and perform the 24-hour burn out.

Schedule For Closure

Within 90 days after a determination is made that hazardous waste will no longer be managed in the BIF units, final closure activities will be initiated. Completion of closure will be within 180 days of receipt of final volume of hazardous waste. All financial calculations should be based on a closure date in the year 2002. Velsicol will notify the Administrator 45 day before beginning final closure. The following tables outline the sample schedules.

Option 1

Task	Month					
	One	Two	Three	Four	Five	Six
Date last volume of Hazardous Waste received in storage tanks	X					
Start burning comparable fuel to flush system	→					
Sample inlet to demonstrate toluene content		→				
Decontaminate secondary containment				→		
P.E Certification						→

Option 2

Task	Month					
	One	Two	Three	Four	Five	Six
Last volume of hazardous waste received in BIF units	X					
Flush with diesel	→	→				
Sample inlet to demonstrate toluene content			→	→		
Combustion Units Burn Out					→	
P.E Certification						→

Option 3

Task	Month					
	One	Two	Three	Four	Five	Six
Last volume of hazardous waste received in BIF units	X					
Connect diesel tank	→	→				
24 hour burn out		→	→			
Sample return line		→	→			
P.E Certification			→			

Closure Cost Estimates

Option 1

1.	Analysis of comparable fuel flush for toluene	\$375.00
2.	Labor & Material-Secondary Containment	\$1000.00
3.	Analysis of rinse water for ignitability	\$50.00
4.	P.E Certification	<u>\$500.00</u>
	Total	\$1925.00

Option 2

1.	Analysis of diesel flush for toluene	\$375.00
2.	Diesel flush (500 Gallons at \$0.95/gallon)	\$475.00
4.	P.E. Certification	<u>\$500.00</u>
	Total	\$1350.00

Option 3

1.	Analysis of diesel flush for toluene	\$375.00
2.	Diesel for burn out (4300 Gallons at \$0.95/gallon)	\$4085.00
3.	Labor (40 hours @ \$25/hour)	\$1000.00
4.	P.E. Certification	\$500.00
5.	Contingency (20%)	<u>\$1192.00</u>
	Total	\$7152.00

Not Dated

Section 2 – Facility Description and Process Information

SECTION 2

FACILITY DESCRIPTION AND PROCESS INFORMATION

Velsicol's Chestertown facility is located in Worton, Maryland. The facility manufactures a variety of specialty organic chemicals including plasticizers, hydraulic fluids, and lubricants. Buildings 11 and 11A, as shown in Figure 2-1, house the four combustion units subject to the BIF regulations. The four liquid waste-fired combustion units regulated under BIF rules are as follows:

<u>Unit No.</u>	<u>Description</u>
1	Eclipse Lookout Hot Oil System (10 MM BTU/Hr)
2	Eclipse Lookout Hot Oil System (14 MM BTU/Hr)
3	Eclipse Lookout Hot Oil System (14 MM BTU/Hr)
4	Cleaver Brooks Boiler (10 MM BTU/Hr)

These units burn a liquid waste fuel referred to as waste light ends (WLE) as a sole fuel source during operation. These units are also capable of burning commercial No. 6 fuel oil as an alternative fuel. The units are not capable of co-firing both WLE and fuel oil. WLE is stored in one of two final storage tanks prior to being fed to the combustion units. This tank feeds each of the combustion units. The WLE is constantly recycled through its piping network to ensure proper mixing in the tank.

Each of the hot oil systems provide heat to dedicated batch chemical production reactors. Unit No. 1 serves two batch reactors. Units No. 2 and No. 3 are dedicated to service of one batch reactor. Unit No. 4, the Cleaver Brooks boiler, provides process steam and space heating requirements for the entire facility. The boiler is in continuous service with a variable steam load corresponding to the fluctuating seasonal and production heating requirements of the facility.

None of the above combustion units are equipped with air pollution control devices due to the nature of the waste fuel. Emissions from combustion of WLE are expected to be comparable to commercial fuels. None of these units are equipped with soot-blowing capability and no short periods of increased emissions other than peak operation have been identified. Maximum emissions are expected to occur at maximum waste firing rates.

August 18, 1980

General Information Form

FD0001820060

I. NAME OF INSTALLATION
II. INSTALLATION MAILING ADDRESS
III. LOCATION OF INSTALLATION

TENNECO CHEMICALS INC
PO BOX 120
CHESTERTOWN, MD 21620

WORTON RD
CHESTERTOWN, MD 21620

in the appropriate section below. If the label is complete and correct, leave Items I, II, and III below blank. If you did not receive a preprinted label, complete all items. "Installation" means a single site where hazardous waste is generated, treated, stored and/or disposed of, or a transporter's principal place of business. Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. The information requested herein is required by law (Section 3010 of the Resource Conservation and Recovery Act).

RECEIVED

FOR OFFICIAL USE ONLY

COMMENTS																								
EPA REGION III Aug 18 1980 000073																								
INSTALLATION'S EPA I.D. NUMBER															APPROVED					DATE RECEIVED (yr., mo., & day)				
FMDD00189006031																				800818				
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15															16					17 18 19 20 21 22				

I. NAME OF INSTALLATION

Chestertown Plant Tenneco Chemicals

II. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX																													
3																													
15 16 17 18 19 20 21 22 23 24 25																													
CITY OR TOWN																				ST.					ZIP CODE				
4																													
15 16 17 18 19 20 21 22 23 24 25																				40 41 42 43 44 45					50 51 52 53 54 55				

III. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER																													
5																													
15 16 17 18 19 20 21 22 23 24 25																													
CITY OR TOWN																				ST.					ZIP CODE				
6																													
15 16 17 18 19 20 21 22 23 24 25																				40 41 42 43 44 45					50 51 52 53 54 55				

IV. INSTALLATION CONTACT

NAME AND TITLE (last, first, & job title)																				PHONE NO. (area code & no.)				
2 Gruber H. Plant Manager																				301-778-1991				
15 16 17 18 19 20 21 22 23 24 25																				45 46 47 48 49 50 51 52 53 54 55				

V. OWNERSHIP

A. NAME OF INSTALLATION'S LEGAL OWNER																								
8 Tenneco Chemicals, Inc.																								
15 16 17 18 19 20 21 22 23 24 25																								

B. TYPE OF OWNERSHIP (enter the appropriate letter into box)

F = FEDERAL
M = NON-FEDERAL

M

VI. TYPE OF HAZARDOUS WASTE ACTIVITY (enter "X" in the appropriate box(es))

☒ A. GENERATION☐ B. TRANSPORTATION (complete item VII)☒ C. TREAT/STORE/DISPOSE☐ D. UNDERGROUND INJECTION

VII. MODE OF TRANSPORTATION (transporters only - enter "X" in the appropriate box(es))

☐ A. AIR☐ B. RAIL☐ C. HIGHWAY☐ D. WATER☐ E. OTHER (specify):

VIII. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your Installation's EPA I.D. Number in the space provided below.

C. INSTALLATION'S EPA I.D. NO.

A. HAZARDOUS WASTES FROM NON-SPECIFIC SOURCES. Enter the four-digit number from 40 CFR Part 261.31 for each listed hazardous waste from non-specific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26
7	8	9	10	11	12
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26

B. HAZARDOUS WASTES FROM SPECIFIC SOURCES. Enter the four-digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific industrial sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26
19	20	21	22	23	24
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26
25	26	27	28	29	30
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26

C. COMMERCIAL CHEMICAL PRODUCT HAZARDOUS WASTES. Enter the four-digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

31	32	33	34	35	36
U 1 9 0	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26
37	38	39	40	41	42
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26
43	44	45	46	47	48
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26

D. LISTED INFECTIOUS WASTES. Enter the four-digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary hospitals, medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26

E. CHARACTERISTICS OF NON-LISTED HAZARDOUS WASTES. Mark "X" in the boxes corresponding to the characteristics of non-listed hazardous wastes your installation handles. (See 40 CFR Parts 261.21 - 261.24.)

☐ 1. IGNITABLE
(D001)

☒ 2. CORROSIVE
(D002)

☐ 3. REACTIVE
(D003)

☐ 4. TOXIC
(D000)

F. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE

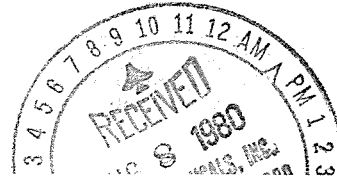
H. Gruber

NAME & OFFICIAL TITLE (type or print)

H. Gruber
Plant Manager

DATE SIGNED

8/11/80



November 18, 1980

Part A Permit Application for Tenneco Chemical



Turner Place, P.O. Box 365
Piscataway, New Jersey 08854
(201) 981-5000

CERTIFIED # P19 3858277

November 18, 1980

EPA - Region III
P. O. Box 1460
Philadelphia, Pennsylvania 19170

Dear Sir:

Attached is the Part A permit application for Tenneco Chemical's Chestertown Plant. This permit is being filed in order to obtain its interim status as a treatment, storage and disposal facility.

Included in this application are:

1. Forms 1 and 3 of the Consolidated Permit Program.
2. A USGS Topographic map.
3. A site plan of the facility.
4. Photographs of those units which handle hazardous waste.

If you have any questions concerning this permit application please call me at (201) 981-5087.

Very truly yours,

TENNECO CHEMICALS, INC.

M. W. Buys, Specialist
Environmental Affairs

MWB:ch

Att.

FORM 1 GENERAL		EPA U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permits Program (Read the "General Instructions" before starting.)		EPA I.D. NUMBER F M D D 0 0 1 8 9 0 0 6 0	
LABEL ITEMS I. EPA I.D. NUMBER III. FACILITY NAME V. FACILITY MAILING ADDRESS VI. FACILITY LOCATION		PLEASE PLACE LABEL IN THIS SPACE 		GENERAL INSTRUCTIONS If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.	

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X'			SPECIFIC QUESTIONS	MARK 'X'		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	X			D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		X	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

18 19 20 21 22 23 24 25 26 27 28 29 30	CHESTERTOWN PLANT NUODEX INC	60
--	------------------------------	----

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)		B. PHONE (area code & no.)	
2 WEFELMEYER JR HERMAN PLANT MGR	301 778 1991	45	55

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX		B. CITY OR TOWN		C. STATE	D. ZIP CODE
3 P O BOX 120	CHESTERTOWN	MD	21620		

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER		B. COUNTY NAME		C. CITY OR TOWN		D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
5 ROUTE 297	KENT	CHESTERTOWN	MD	21620	KEN			

JAN 26 1983

II. SIC CODES (4-digit, in order of priority)

A. FIRST										B. SECOND									
2 8 6 9 (specify) Industrial Organic Chemicals										7 2 9 9 2 (specify) Lubricating Oils & Grease									
C. THIRD										D. FOURTH									
7 (specify)										7 (specify)									

III. OPERATOR INFORMATION

A. NAME																																																												B. Is the name listed in Item VIII-A also the owner?																			
NUODEX INC																																																												<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO																			
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)																																																												D. PHONE (area code & no.)																			
F = FEDERAL S = STATE P = PRIVATE																														M = PUBLIC (other than federal or state) O = OTHER (specify)																														P (specify)										A 2 0 1 9 8 1 5 0 0 0									
E. STREET OR P.O. BOX																																																																															
0 BOX 365 TURNER PLACE																																																																															
F. CITY OR TOWN																																								G. STATE										H. ZIP CODE										IX. INDIAN LAND																			
PISCATAWAY																																								NJ										0 8 8 5 4										Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO																			

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)																														D. PSD (Air Emissions from Proposed Sources)																													
M D 8 1 - D P - 0 0 1 4																														9 P NONE																													
B. UIC (Underground Injection of Fluids)																														E. OTHER (specify)																													
U NONE																														9 P NONE (specify)																													
C. RCRA (Hazardous Wastes)																														E. OTHER (specify)																													
M D D 0 0 1 8 9 0 0 6 0																														9 P NONE (specify)																													

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

NUODEX INC. manufactures organic esters (phthalate esters) and polyesters and blends synthetic lubricants.

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)																																								B. SIGNATURE																				C. DATE SIGNED																			
Joseph Fath Executive Vice President																																																												1/21/83																			

COMMENTS FOR OFFICIAL USE ONLY

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

CONTINUE ON REVERSE

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

V. DESCRIPTION OF HAZARDOUS WASTES

- A. EPA HAZARDOUS WASTE NUMBER - Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.
- B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.
- C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

- 1. PROCESS CODES:
For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.
Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).
- 2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

- 1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
- 2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
- 3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)		D. PROCESSES							
	1. PROCESS CODES (enter)								2. PROCESS DESCRIPTION (if a code is not entered in D(1))						
X-1	K	0	5	4	900		P	T	0	3	D	8	0		
X-2	D	0	0	2	400		P	T	0	3	D	8	0		
X-3	D	0	0	1	100		P	T	0	3	D	8	0		
X-4	D	0	0	2										included with above	

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

EPA I.D. NUMBER (enter from page 1)													FOR OFFICIAL USE ONLY												
<div style="display: flex; justify-content: space-between;"> <div> <div style="border: 1px solid black; padding: 2px;">S</div> <div style="border: 1px solid black; padding: 2px;">W</div> <div style="border: 1px solid black; padding: 2px;">M</div> <div style="border: 1px solid black; padding: 2px;">D</div> <div style="border: 1px solid black; padding: 2px;">D</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">1</div> <div style="border: 1px solid black; padding: 2px;">8</div> <div style="border: 1px solid black; padding: 2px;">9</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">6</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">1</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">T/A</div> <div style="border: 1px solid black; padding: 2px;">C</div> </div> </div>													<div style="display: flex; justify-content: space-between;"> <div> <div style="border: 1px solid black; padding: 2px;">S</div> <div style="border: 1px solid black; padding: 2px;">W</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">1</div> <div style="border: 1px solid black; padding: 2px;">2</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">13</div> <div style="border: 1px solid black; padding: 2px;">14</div> <div style="border: 1px solid black; padding: 2px;">15</div> </div> <div> <div style="border: 1px solid black; padding: 2px;">23</div> <div style="border: 1px solid black; padding: 2px;">24</div> <div style="border: 1px solid black; padding: 2px;">25</div> </div> </div> <div style="text-align: center; font-weight: bold; font-size: 1.2em;">DUP</div>												

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

EPA I.D. NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	U 0 2 8	400,000	P	T 0 1 T 0 2 S 0 4 D 8 1	
2	U 0 6 9	30,000	P	T 0 1 T 0 2 S 0 4 D 8 1	
3	D 0 0 2	8,500,000	P	T 0 1 T 0 2 S 0 4 D 8 1	
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

JAN 26 1983

V. DESCRIPTION OF HAZARDOUS WASTE 3 (continued)
E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. (enter from page 1)													
M	D	D	0	0	1	8	9	0	0	6	0	T/A	C
													6

VII. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail).

VI. PHOTOGRAPHS

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)										LONGITUDE (degrees, minutes, & seconds)									
			3	9	1	5	0	5	0					0	7	6	0	5	0
			65	66	67	68	69	70	71					72	73	74	75	76	77

VIII. FACILITY OWNER

- ☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.
- B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER										2. PHONE NO. (area code & no.)																			
3. STREET OR P.O. BOX										4. CITY OR TOWN										5. ST.					6. ZIP CODE				
Turner Ave, P.O. Box 365										Piscataway N.J. 08854																			

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

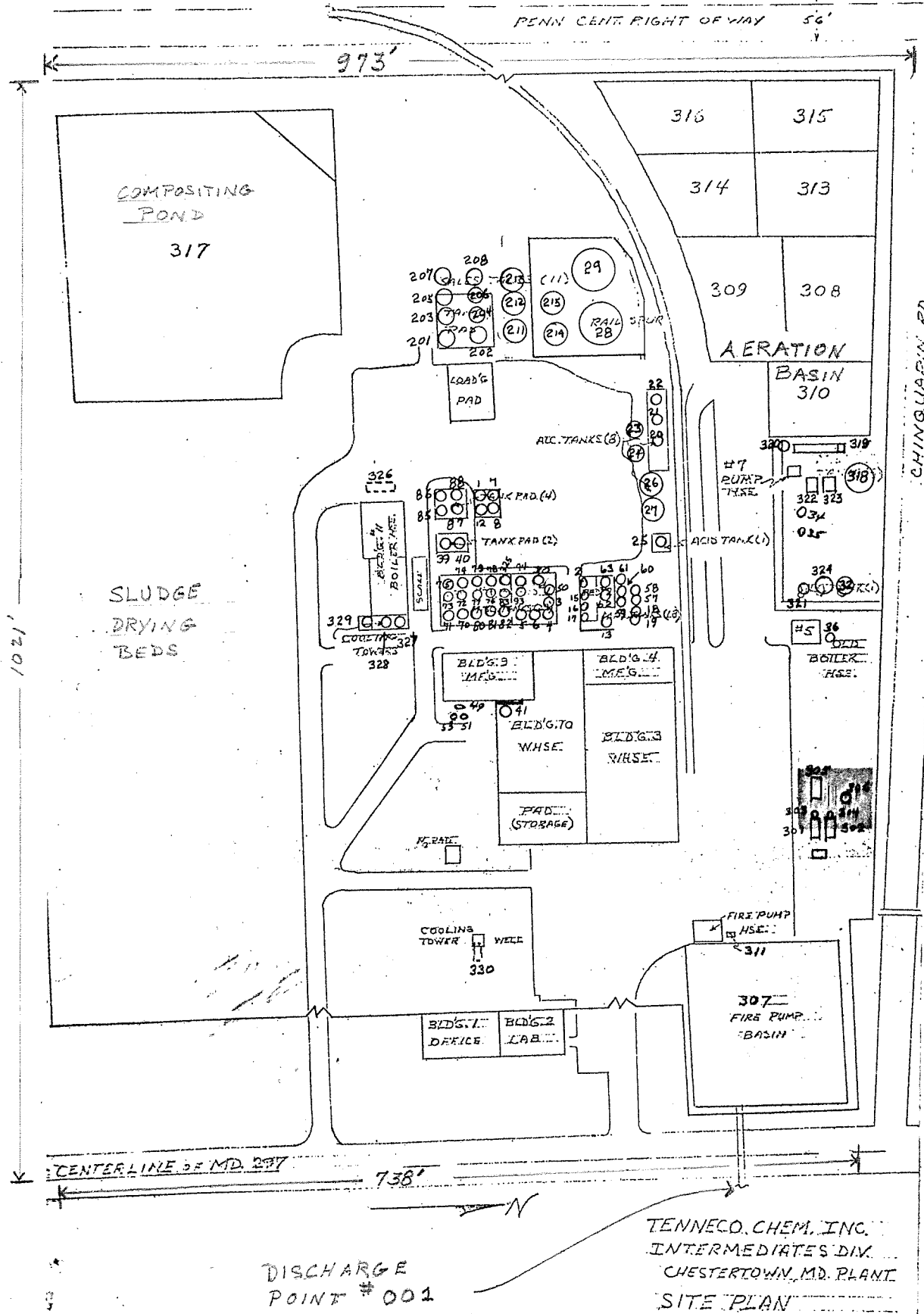
A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED
Joseph Fath, Vice President		1/21/83

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED
HERMAN A. WEFELMEYER, JR. PLANT MANAGER		1-20-83

V. FACILITY DRAWING (see page 4)



JAN 26 1983

UPDATE 8-18-76
 REG
 SCALE 1/4" = 100' WITH TANKS

DWG. #310

SITE PLAN

TENNeco CHEM. INC.
 INTERMEDIATES DIV.
 CHESTERTOWN, MD. PLANT

983

January 21, 1983

Correspondence Regarding Part A Permit Application



Turner Place, P.O. Box 365
Piscataway, New Jersey 08854
(201) 981-5000

OK 2/1/83
ATB

9964

January 21, 1983

Ms. Shirley Bulkin, att: 3AW32
USEPA Region III
Curtis Building
6th and Walnut Streets
Philadelphia, Pennsylvania 19106

Dear Ms. Bulkin:

As requested by Ms. Joan Henry, of your department, in a telephone conversation of January 13, 1983, we are submitting to you the Part A RCRA permit application for the Chestertown, Maryland plant of Nuodex Inc.

As mentioned in an earlier communication to you (December 22, 1982), Nuodex Inc. purchased this plant from Tenneco Chemicals, Inc. and is seeking the transfer of the EPA I.D. number to its name from that of Tenneco.

If additional information is required, please contact me at (201)-981-5255.

Very truly yours,

A handwritten signature in dark ink, reading "Mario Q. Ceprini". The signature is written in a cursive style with a large, stylized "M" and "C".

Mario Q. Ceprini, Ph.D.
Manager, Environmental Affairs

MQC/ec

Enclosures

JAN 26 1983

January 26, 1983

General Information Form

I. NAME OF INSTALLATION

II. INSTALLATION MAILING ADDRESS

III. LOCATION OF INSTALLATION

PLEASE PLACE LABEL IN THIS SPACE

New Owner

in the appropriate section below. If the label is complete and correct, leave Items I, II, and III below blank. If you did not receive a preprinted label, complete all items. "Installation" means a single site where hazardous waste is generated, treated, stored and/or disposed of, or a transporter's principal place of business. Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. The information requested herein is required by law (Section 3010 of the Resource Conservation and Recovery Act).

FOR OFFICIAL USE ONLY

COMMENTS

INSTALLATION'S EPA I.D. NUMBER

APPROVED

DATE RECEIVED (yr., mo., & day)

I. NAME OF INSTALLATION

II. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX

CITY OR TOWN

ST.

ZIP CODE

JAN 26 1983

III. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER

CITY OR TOWN

ST.

ZIP CODE

IV. INSTALLATION CONTACT

NAME AND TITLE (last, first, & job title)

PHONE NO. (area code & no.)

V. OWNERSHIP

A. NAME OF INSTALLATION'S LEGAL OWNER

B. TYPE OF OWNERSHIP (enter the appropriate letter into box)

F = FEDERAL
M = NON-FEDERAL

VI. TYPE OF HAZARDOUS WASTE ACTIVITY (enter "X" in the appropriate box(es))

☒ A. GENERATION
☒ B. TRANSPORTATION (complete item VII)
☒ C. TREAT/STORE/DISPOSE
☐ D. UNDERGROUND INJECTION

VII. MODE OF TRANSPORTATION (transporters only - enter "X" in the appropriate box(es))

☐ A. AIR
☐ B. RAIL
☐ C. HIGHWAY
☐ D. WATER
☐ E. OTHER (specify):

VIII. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your Installation's EPA I.D. Number in the space provided below.

C. INSTALLATION'S EPA I.D. NO.

A. HAZARDOUS WASTES FROM NON-SPECIFIC SOURCES. Enter the four-digit number from 40 CFR Part 261.31 for each listed hazardous waste from non-specific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26
7	8	9	10	11	12
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26

B. HAZARDOUS WASTES FROM SPECIFIC SOURCES. Enter the four-digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific industrial sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26
19	20	21	22	23	24
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26
25	26	27	28	29	30
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26

C. COMMERCIAL CHEMICAL PRODUCT HAZARDOUS WASTES. Enter the four-digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

31	32	33	34	35	36
U 1 9 0					
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26
37	38	39	40	41	42
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26
43	44	45	46	47	48
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26

D. LISTED INFECTIOUS WASTES. Enter the four-digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary hospitals, medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54
23 - 26	23 - 26	23 - 26	23 - 26	23 - 26	23 - 26

E. CHARACTERISTICS OF NON-LISTED HAZARDOUS WASTES. Mark "X" in the boxes corresponding to the characteristics of non-listed hazardous wastes your installation handles. (See 40 CFR Parts 261.21 - 261.24.)

<input type="checkbox"/> 1. IGNITABLE (D001)	<input checked="" type="checkbox"/> 2. CORROSIVE (D002)	<input type="checkbox"/> 3. REACTIVE (D003)	<input type="checkbox"/> 4. TOXIC (D000)
--	---	---	--

K. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE <i>Herman A Wefelmeyer, Jr.</i>	NAME & OFFICIAL TITLE (type or print) Herman Wefelmeyer, Jr. Plant Manager	DATE SIGNED 1-21-83
--	--	------------------------

February 3, 1983

Correspondence Regarding Change to Conditions of Operations During Interim Status



9963

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
6TH AND WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

February 3, 1983

Mr. Joseph Fath
Nuodex Inc.
Turner Place, P.O. Box 365
Piscataway, New Jersey 08854

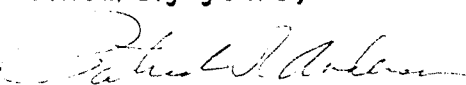
Re: EPA I.D. No. MDD 00 189 0060

Dear Mr. Fath:

This is to acknowledge receipt of your letter dated December 22, 1982 in which you request a change to "Conditions of Operations During Interim Status."

Enclosed is an amended form reflecting the change(s). If we can be of any further assistance, please do not hesitate to contact Ms. Joan Henry, a member of my staff, on 215-597-8751.

Sincerely yours,


Patrick Anderson
Chief, RCRA Permit and Pesticides Section
Air and Waste Management Division

CONDITIONS OF OPERATION DURING
INTERIM STATUS

AMENDED

Date Prepared: February 3, 1983

The information shown below is based solely on the information that the owner and operator of this facility submitted in Part A of the Hazardous Waste Permit Application. This is not a determination by EPA that this facility is an environmentally acceptable facility for treating, storing or disposing of the hazardous wastes listed below.

I. Facility name, location, and EPA Identification Number.

Name: Nuodex Inc. - Chestertown Plant

Location: Route 297
Chestertown, MD 21620

EPA I.D. No.: MDD 00 189 0060

II. EPA considers the following to be the owner or operator of the facility and therefore the person(s) who must comply with the requirements set forth in 40 CFR Parts 122 and 265.

Owner's Name: Nuodex Inc.
Attn: Joseph Fath, Vice President

Operator's Name: Herman Wefelmeyer, Jr., Plant Manager

III. During the period of interim status, the facility may use only the following processes for treating, storing or disposing of hazardous waste, up to the design capacities that are indicated.

<u>PROCESS</u>	<u>DESIGN CAPACITY</u>
<u>T01</u>	<u>75,000 Gals/Day</u>
<u>T02</u>	<u>75,000 Gals/Day</u>
<u>D81</u>	<u>2.0 Acres</u>
<u>S04</u>	<u>2,000,000 Gals.</u>

IV. During the period of interim status, the facility may handle only the hazardous wastes with the following EPA Hazardous Waste Numbers, and/or solid waste exhibiting hazardous characteristics with the following EPA Hazardous Waste Numbers.

<u>U028</u>	<u>U069</u>	<u>D002</u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

April 8, 1986

Correspondence Regarding Solid Waste Management Units

NUODEX INC.
Ahals Company

Route 297
P.O. Box 120
Chestertown, Maryland 21620
(301) 778-1991

April 8, 1986

RECEIVED
MD/DE/DC SECTION

3HW30
C12
10004
RECEIVED
APR 15 1986

Hazardous Waste Management Division
EPA - Region III

USEPA, REGION III
841 Chestnut Building
Philadelphia, Pa. 19106

APR 10 1986

U.S. EPA, Region III

Attention: Mr. Stephen R. Wassersug, Director

Hazardous Waste Management Division

Dear Mr. Wassersug:

Enclosed is the information you requested in your letter of March 10, 1986, in which you requested information on all present and past solid waste management units at the Chestertown, Maryland, site.

Before you review this information, you should be aware of the history of the site. In 1959, the site was purchased by Lehigh Chemical Company to be used for a planned expansion. In 1966, Tenneco Chemicals, Inc., purchased this site including all assets. In December, 1982, this plant, as well as the rest of Tenneco Chemicals, Inc. was purchased by the managers of Tenneco Chemicals and became Nuodex Inc. While we were still Tenneco Chemicals, Inc., an application for RCRA was submitted. It has since been determined that this site is not a TSDF. We are still considered to be a generator under RCRA. Documentation of this is enclosed. Information which would have been reported under RCRA has been included in our NPDES permit. This primarily consists of the requirement for monitoring wells and to report sampling data quarterly. These reports have been submitted each quarter in the same package as the discharge and on-site storage data. A table of recent monitoring wells results is included for your reference. I feel that these results are evidence that the ground water has been and is free of contamination from our plant. In late 1983, there was a question concerning possible contamination being found in a couple of these monitoring wells. After meetings with the Maryland Department of Health and Mental Hygiene representative, we agreed to an extensive monthly monitoring program on two monitoring wells. After we were able to prove that the results were erroneous, probably due to contamination at the outside laboratory, we began using another laboratory. After an additional year of monthly monitoring which indicated contaminant free ground water, the Department of Health and Mental Hygiene representative agreed that we could resume quarterly monitoring. We are in the process of requesting semi-annual monitoring based on a clean record.

As a matter of interest, this plant has been burning otherwise unusable organic byproducts for fuel contents since approximately 1972. This was done to both eliminate the stream as a waste and to displace a significant quantity of #6 fuel oil required to operate the plant. In order to continue doing this, we were required to obtain a limited disposal facility permit in 1984.

USEPA, REGION III
Attn: Mr. Stephen R. Wassersug

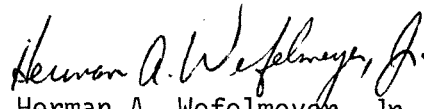
April 8, 1986
Page 2

We believe that we have demonstrated compliance with the letter and the spirit of regulations which apply to the plant and all permits under which we operate. We believe that this is verified both in the discharge and monitoring well analyses as well as periodic inspections which are conducted at the plant.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Very truly yours,

NUODEX INC.


Herman A. Wefelmeyer, Jr.
Plant Manager

HAW:emt
Attachments

cc: Mr. Alvin Bowles, Maryland Department of Health & Mental Hygiene
201 W. Preston Street, Baltimore, Md. 21201

cc: M. Ceprini
156.000

1. Enclosed is a site plan indicating all existing and former solid waste management units. The scale is 1" equals 60'. I was unable to obtain a copy of a topographic map indicating the 1,000 feet surrounding the plant at a scale of 1" equals 200'. However, I have enclosed a topographic map with a scale of 1" equals 2000'. The location of the Nuodex plant is indicated on the map.

EPA REGION III
RCRA RECORDS CENTER

DOC ID # 10006
PAGE # 4

IMAGERY COVER SHEET

THIS DOCUMENT IS AN UNSCANNABLE ITEM

Contact the RCRA Records Center to view this document.

FACILITY NAME Velgical Chesterton Plant

EPA ID # M00001890060

REPORT OR DOCUMENT TITLE RCRA Application

DATE OF DOCUMENT 7/8/86

DESCRIPTION OF IMAGERY Map: Facility Storage

NUMBER AND TYPE OF IMAGERY ITEM(S) 1

DATE OF IMAGERY _____

EPA REGION III
RCRA RECORDS CENTER

DOC ID # 10006
PAGE # 5

IMAGERY COVER SHEET

THIS DOCUMENT IS AN UNSCANNABLE ITEM

Contact the RCRA Records Center to view this document.

FACILITY NAME Velisical Chestertown Plant.

EPA ID # MD0001896060

REPORT OR DOCUMENT TITLE RCRN Application

DATE OF DOCUMENT 4/8/86

DESCRIPTION OF IMAGERY Map.

NUMBER AND TYPE OF IMAGERY ITEM(S) 1

DATE OF IMAGERY _____

2. Attached is a list of all existing solid waste management units. They are categorized by the type of waste treatment or storage function for operation.

Additionally, there is one former solid waste management unit which is no longer in use for that application. This is T-307, which is presently a holding pond for the plant fire protection sprinkler system. The dimensions of this pond are 100' x 100' x 6' deep. This pond was in use as a solid waste management unit from 1959 through 1968. At that point, this pond was pumped empty to another pond. It was then scraped out and the material removed from the pond was sent to the Nicholson Landfill in Kent County.

SOLID WASTE MANAGEMENT UNITS

I. WASTE WATER TREATMENT SYSTEM (NPDES Permit Number MD-0000345)

A. Primary Treatment (API Separators)

<u>Tank No.</u>	<u>Purpose</u>	<u>Construction</u>	<u>Dimensions</u>	<u>Capacity</u>
T-300	Junction Box	Concrete	5' x 10' x 4'H	1,000 Gal.
T-301	API Separator	Mild Steel	5'5" x 24' x 6'8"H	5,000 Gal.
T-302	API Separator	Mild Steel	5'5" x 24' x 6'8"H	5,000 Gal.
T-303	Sump	Mild Steel	5'5"D x 9'2"H	1,000 Gal.
T-304	Sump	Mild Steel	5'5"D x 9'2"H	1,000 Gal.
T-305	Organic Skimmings Storage	Mild Steel	6'D x 23'8"H	5,000 Gal.
T-306	Organic Skimmings Storage	Mild Steel	6'D x 23'8"H	5,000 Gal.

B. Primary Treatment (Organic Recovery)

<u>Tank No.</u>	<u>Purpose</u>	<u>Construction</u>	<u>Dimensions</u>	<u>Capacity</u>
T-318	Decantation	Mild Steel	33'D x 31'8"H	200,000 Gal.
T-322	Recoverable Organic Storage	Mild Steel	10'6"D x 15'8"H	10,000 Gal.
T-323	Recoverable Organic Storage	Mild Steel	10'6"D x 15'8"H	10,000 Gal.
T-314	Backup Decantation Pond	Earth	100' x 75' x 6'H	200,000 Gal.
T-317	Raw Waste Storage Pond	Earth	320' x 290' x 5'6"H	2,000,000 Gal.

C. Secondary Treatment (Biological)

<u>Tank No.</u>	<u>Purpose</u>	<u>Construction</u>	<u>Dimensions</u>	<u>Capacity</u>
T-308	Biological Treatment Pond	Earth	69' x 66'6" x 7'6"H	140,000 Gal.
T-309	Biological Treatment Pond	Earth	80' x 70'6" x 7'H	140,000 Gal.
T-310	Biological Treatment Pond	Earth	91' x 59'3" x 7'6"H	200,000 Gal.
T-319	Dissolved Air Flotation Separator	Mild Steel	6' x 15' x 3'H	2,000 Gal.

I. WASTE WATER TREATMENT SYSTEM CONTINUED

C. Secondary Treatment (Biological) Continued

<u>Tank No.</u>	<u>Purpose</u>	<u>Construction</u>	<u>Dimensions</u>	<u>Capacity</u>
T-320	Biological Sludge Sump	Mild Steel	6' x 6' x 4'1"H	1,000 Gal.
T-313	Holding Pond	Earth	95' x 75' x 5'6"H	175,000 Gal.
T-315	Holding Pond	Earth	105' x 78' x 6'H	225,000 Gal.
T-316	Holding Pond	Earth	115' x 75' x 6'H	225,000 Gal.

II. BY-PRODUCT FUEL STORAGE SYSTEM (Limited Facility Permit)

<u>Tank No.</u>	<u>Purpose</u>	<u>Construction</u>	<u>Dimensions</u>	<u>Capacity</u>
T-321	Flammables Storage	Mild Steel	6'D x 28'5"H	6,000 Gal.
T-324	Flammables Storage	Mild Steel	10'D x 21'3"H	12,000 Gal.
T-325	Combustables Storage	Mild Steel	10'D x 21'2"H	12,000 Gal.
T-339	Flammables Storage	Stainless Steel	10'10"D x 23'6"H	16,000 Gal.

III. SOLIDS HANDLING SYSTEM

A. Non-Hazardous Materials

<u>Container Description</u>	<u>Construction</u>	<u>Purpose</u>
Plots	Earth	Dry biological sludge
2 cubic yard bins	Mild Steel	Temporary storage of non-phthalate filter cake
30 cubic yard roll-off bin	Mild Steel	Accumulate production trash
6 cubic yard bin	Mild Steel	Accumulate plant trash

B. Hazardous Materials (RCRA Permit Number MDD001890060)

<u>Container Description</u>	<u>Construction</u>	<u>Purpose</u>
20 cubic yard roll-off bin	Mild Steel	Temporary storage of phthalate ester filter cake

3. There are six types of waste generated and handled at the Nuodex, Chestertown plant. These are: raw wastewater, waste organics, biological sludge, API separator sludge, non-hazardous filter cake, and hazardous filter cake.

The raw wastewater stream consists of all waste water generated during the processing of esters manufactured at the plant as well as water use for cleaning and blow-down water from steam boilers and cooling towers. The blow-down water is handled separately and used for diluting the raw waste in the biological treatment ponds. The remaining waste passes through an API separator where solid materials settle out. These solid materials (API separator sludge) are periodically removed and disposed of as hazardous waste. This is usually in combination with the hazardous filter cake, but it may be disposed of separately. In the API separator, organic material from processing and cleaning separates by gravity to the top and is removed to organic recovery tank. The remaining raw wastewater is pumped to a secondary separation tank where additional organic material is removed. From there, the raw wastewater is pumped to a compositing and storage pond and finally to the activated sludge aerobic treatment pond. The organic material that is removed from the raw wastewater is consolidated in tanks and eventually recycled for further processing. The result of the processing is a plasticizer which is usable in certain applications and is sold to customers who do not require a premium plasticizer. During this reprocessing, volatile organics are removed and consolidated with other burnables to be used as a fuel. These other burnables include alcohols which are no longer suitable for reacting into plasticizers as well as toluene which is used as an azeotroping agent.

The biological treatment of the raw wastewater is accomplished through the use of activated sludge. This sludge decants with the treated waste to a dissolved air flotation separator. The sludge is separated to a tank and is either recycled or pumped to sludge drying beds. After drying, the sludge is disced in the ground in accordance with standard land farming procedures.

During the processing of plasticizers, there is a filtration procedure which removes suspended matter from the plasticizer in order to achieve the desired quality. This procedure consists of adding diatomaceous earth to the batch and filtering through either a US Filter or a Sparkler filter. After filtering the batch, the filter is air blown dry for approximately one to two hours. In this way, we recover a maximum amount of product and create a filter cake which is as dry as possible. Since we produce esters made from phthalic anhydride and acids other than phthalic anhydride, we generate filter cake which is considered to be both hazardous and non-hazardous. The non-hazardous filter cake is handled separately from the hazardous filter cake. The non-hazardous filter cake is accumulated in two cubic yard bins which are dumped approximately two times per week and sent to the Kent County Landfill. The hazardous filter cake is accumulated in 20 yard roll-off bins and are sent to a secure landfill using the manifest system. Storage of these bins on site is less than 90 days.

4. To the best of my knowledge, which includes both personal experience, and questioning of management employees who have been at the site for 25 years or more, there have been no releases of wastes into the environment. Occasionally, there have been operating problems, including human error, and mechanical failures. Any material which may have been released was immediately cleaned up, including removing earth and stones as necessary to avoid migration into the ground and/or ground waters. This is supported by the data from the monitoring well program. Although quarterly reports have been sent to Region III, I am attaching a summary of the monitoring well data for each well for your convenience.

October 6, 1988

Correspondence Regarding Merger of Nordex and Huls

750
MDD

hüls

HÜLS AMERICA INC.

9954

MDD 001890060

October 6, 1988

Turner Place, P.O. Box 365
Piscataway
NJ 08855-0365
Tel: (201) 981-5000
Telex ITT: 4754188
FAX: (201) 981-5057

REPT

Mr. James M. Seif, Regional Administrator
U.S. EPA, Region III
841 Chestnut Building
Philadelphia, PA 19107

OCT 12 1988

EPA, REGION III
OFFICE OF REGIONAL ADMINISTRATOR

Re: Chestertown, MD Operation

Dear Sir:

Effective July 31, 1988, as a result of the merger of Nuodex Inc. into its parent company, Hüls America Inc., as indicated in the attached letter, and in order to ensure continuity of operations, it is respectfully requested that all permits and/or other pertinent documents involving your Department and Nuodex be transferred to:

Hüls America Inc.
P.O. Box 365
Turner Place
Piscataway, NJ 08855-0365

Thank you for your assistance in this matter. If there are any questions, please contact me at (201)-981-5255.

Yours truly,

Mario Q. Ceprini

Mario Q. Ceprini, Ph.D.
Director, Environmental and
Occupational Health Services

MQC/ec

Attachment

*protective files
1105-57*

MDD 001890060



HÜLS AMERICA INC.

Turner Place, P.O. Box 365
Piscataway
NJ 08855-0365
Tel: (201) 981-5000

July 31, 1988

TO WHOM IT MAY CONCERN:

Please be informed that Nuodex Inc. has filed the necessary papers for the merger of Nuodex Inc. into its parent company, Hüls America Inc.

As a result of this merger, all business and operations of Nuodex Inc. will be continued under the name of Hüls America Inc.

Very truly yours,

NUODEX INC.

By 

Title Executive Vice President

August 15, 1991

Hazardous Waste Permit Application Part A

For EPA Regional Use Only		EPA United States Environmental Protection Agency Washington, DC 20460		For State Use Only	
		Hazardous Waste Permit Application Part A (Read the Instructions before starting)		9969	
Date Received Month Day Year					
I. ID Number(s)					
A. EPA ID Number		B. Secondary ID Number (If applicable)			
M D D O O I 8 9 0 0 6 0					
II. Name of Facility					
H U L S A M E R I C A I N C .					
III. Facility Location (Physical address not P.O. Box or Route Number)					
A. Street					
R O U T E 2 9 7					
Street (continued)					
City or Town		State		ZIP Code	
C H E S T E R T O W N		M D		2 1 6 2 0 -	
County Code (If known)		County Name			
		K E N T			
B. Land Type		C. Geographic Location		D. Facility Existence Date	
(enter code)		LATITUDE (degrees, minutes, & seconds)		LONGITUDE (degrees, minutes, & seconds)	
P		3 9 1 5 5 0		7 6 0 5 3 0	
Month		Day		Year	
				1 9 5 8	
IV. Facility Mailing Address					
Street or P.O. Box					
R O U T E 2 9 7					
City or Town		State		ZIP Code	
C H E S T E R T O W N		M D		2 1 6 2 0 -	
V. Facility Contact (Person to be contacted regarding waste activities at facility)					
Name (last)		(first)			
G O R S U C H		R I C H A R D			
Job Title		Phone Number (area code and number)			
E N V . M A N A G E R		3 0 1 - 7 7 8 - 1 9 9 1			
VI. Facility Contact Address (See Instructions)					
A. Contact Address Location Mailing		B. Street or P.O. Box			
X					
City or Town		State		ZIP Code	

EPA I.D. Number (enter from page 1)

Secondary ID Number (enter from page 1)

M D D 0 0 1 8 9 0 0 6 0

VII. Operator Information (see instructions)

Name of Operator

H U L S A M E R I C A I N C .

Street or P.O. Box

R O U T E 2 9 7

City or Town

C H E S T E R T O W N

State

ZIP Code

M D

2 1 6 2 0 -

Phone Number (area code and number)

3 0 1 - 7 7 8 - 1 9 9 1

B. Operator Type

P

C. Change of Operator Indicator

Yes

No

Date Changed

Month

Day

Year

VIII. Facility Owner (see instructions)

A. Name of Facility's Legal Owner

H U L S A M E R I C A I N C .

Street or P.O. Box

2 T U R N E R P L A C E

City or Town

P I S C A T A W A Y

State

ZIP Code

N J

0 8 8 5 5 -

Phone Number (area code and number)

9 0 8 - 9 8 1 - 5 0 0 0

B. Owner Type

P

C. Change of Owner Indicator

Yes

No

Date Changed

Month

Day

Year

IX. SIC Codes (4-digit, in order of significance)

Primary

2 8 6 9 (description) PLASTICIZERS

Secondary

(description)

Secondary

2 9 9 2 (description) SYNTHETIC LUBRICANTS

Secondary

(description)

X. Other Environmental Permits (see instructions)

A. Permit Type
(enter code)

N

B. Permit Number

M D 0 0 0 0 3 4 5

C. Description

NPDES SURFACE DISCHARGE PERMIT

M D D 0 0 1 8 9 0 0 6 0

XI. Nature of Business (provide a brief description)

The Huls America Inc. Chestertown, Maryland facility manufactures monomeric and polymeric plasticizers and intermediates used in colorants and coatings. Additionally, synthetic lubricating oils and greases are manufactured. The facility is classified as an "on-site" operation for burning hazardous waste generated on-site.

XII. Process - Codes and Design Capacities

- A. **PROCESS CODE** - Enter the code from the list of process codes below that best describes each process to be used at the facility. Twelve lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. If a process will be used that is not included in the list of codes below, then describe the process (including its design capacity) in the space provided in Item XIII.
- B. **PROCESS DESIGN CAPACITY** - For each code entered in column A, enter the capacity of the process.
1. **AMOUNT** - Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process unit.
 2. **UNIT OF MEASURE** - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.
- C. **PROCESS TOTAL NUMBER OF UNITS** - Enter the total number of units used with the corresponding process code.

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	UNIT OF MEASURE	UNIT OF MEASURE CODE
D79	DISPOSAL: INJECTION WELL	GALLONS; LITERS; GALLONS PER DAY; OR LITERS PER DAY	GALLONS	G
D80	LANDFILL	ACRE-FEET OR HECTARE-METER	GALLONS PER HOUR	E
D81	LAND APPLICATION	ACRES OR HECTARES	GALLONS PER DAY	U
D82	OCEAN DISPOSAL	GALLONS PER DAY OR LITERS PER DAY	LITERS	L
D83	SURFACE IMPOUNDMENT	GALLONS OR LITERS	LITERS PER HOUR	H
S01	STORAGE: CONTAINER (barrel, drum, etc.)	GALLONS OR LITERS	LITERS PER DAY	V
S02	TANK	GALLONS OR LITERS	SHORT TONS PER HOUR	D
S03	WASTE PILE	CUBIC YARDS OR CUBIC METERS	METRIC TONS PER HOUR	W
S04	SURFACE IMPOUNDMENT	GALLONS OR LITERS	SHORT TONS PER DAY	N
T01	TREATMENT: TANK	GALLONS PER DAY OR LITERS PER DAY	METRIC TONS PER DAY	S
T02	SURFACE IMPOUNDMENT	GALLONS PER DAY OR LITERS PER DAY	POUNDS PER HOUR	J
T03	INCINERATOR	SHORT TONS PER HOUR; METRIC TONS PER HOUR; GALLONS PER HOUR; LITERS PER HOUR; OR BTU'S PER HOUR	KILOGRAMS PER HOUR	R
T04	OTHER TREATMENT <small>(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundment or incinerators. Describe the processes in the space provided in item XIII.)</small>	GALLONS PER DAY; LITERS PER DAY; POUNDS PER HOUR; SHORT TONS PER HOUR; KILOGRAMS PER HOUR; METRIC TONS PER DAY; METRIC TONS PER HOUR; OR SHORT TONS PER DAY	CUBIC YARDS	Y
			CUBIC METERS	C
			ACRES	B
			ACRE-FEET	A
			HECTARES	Q
			HECTARE-METER	F
			BTU's PER HOUR	X

EPA I.D. Number (enter from page 1)

Secondary ID Number (enter from page 1)

M D D 0 0 1 8 9 0 0 6 0

XII. Process - Codes and Design Capacities (continued)

EXAMPLE FOR COMPLETING ITEM XII (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 300 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

Line Number	A. PROCESS CODE (from list above)				B. PROCESS DESIGN CAPACITY		C. PROCESS TOTAL NUMBER OF UNITS	FOR OFFICIAL USE ONLY			
					1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)					
X 1	S	0	2		600	G	0 0 2				
X 2	T	0	3		20	E	0 0 1				
1	T	0	4		98	E	0 0 1				
2	T	0	4		78	E	0 0 1				
3	T	0	4		117	E	0 0 2				
4											
5											
6											
7											
8											
9											
1 0											
1 1											
1 2											

NOTE: If you need to list more than 12 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for additional treatment processes in Item XIII.

XIII. Additional Treatment Processes (follow instructions from Item XII)

Line Number (enter numbers in sequence with Item XII)	A. PROCESS CODE				B. TREATMENT PROCESS DESIGN CAPACITY		C. PROCESS TOTAL NUMBER OF UNITS	D. DESCRIPTION OF PROCESS
					1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)		
1	T	0	4		98	ED	0 0 1	INDUSTRIAL BOILER
2	T	0	4		78	ED	0 0 1	INDUSTRIAL BOILER
3	T	0	4		117	ED	0 0 2	INDUSTRIAL BOILER
	T	0	4					

XIV. Description of Hazardous Wastes

- A. **EPA HAZARDOUS WASTE NUMBER** - Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR, Part 261 Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.
- B. **ESTIMATED ANNUAL QUANTITY** - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.
- C. **UNIT OF MEASURE** - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item XI A. on page 3 to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item XI A. on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that processes that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

- Enter the first two as described above.
- Enter "000" in the extreme right box of Item XIV-D(1).
- Enter in the space provided on page 7, Item XIV-E, the line number and the additional code(s).

2. **PROCESS DESCRIPTION**: If a code is not listed for a process that will be used, describe the process in the space provided on the form (D(2)).

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

- Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
- In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
- Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM XIV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number		A. EPA HAZARD WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESS									
								(1) PROCESS CODES (enter)						(2) PROCESS DESCRIPTION (If a code is not entered in D(1))			
X	1	K	0	5	4	900	P	T	0	3	D	8	0				
X	2	D	0	0	2	400	P	T	0	3	D	8	0				
X	3	D	0	0	1	100	P	T	0	3	D	8	0				
X	4	D	0	0	2												Included With Above

EPA I.D. Number (enter from page 1)

M D D 0 0 1 8 9 0 0 6 0

Secondary ID Number (enter from page 1)

XIV. Description of Hazardous Wastes (continued)

Line Number	A. EPA HAZARDOUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				(1) PROCESS CODES (enter)	(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	D 0 0 1	4,800,000	P	T 0 4	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					

EPA I.D. Number (enter from page 1)

Secondary ID Number (enter from page 1):

M	D	D	0	0	1	8	9	0	0	6	0
---	---	---	---	---	---	---	---	---	---	---	---

XIV. Description of Hazardous Waste (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE C.

[illegible]

XV. Map

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

XVII. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

XVIII. Certification(s)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner Signature

John Lehman
Title (type or print)

Date Signed _____

8-15-91

Name and Official Title (type or print)

Klaus Schrage, Vice-President

Operator Signature

Joseph Furber

Date Signed _____


8/20/91

Name and Official Title (type or print)

Joseph Fuhrman, Plant Manager

XIX. Comments

Note: Mail completed form to the appropriate EPA Regional or State Office. (refer to instructions for more information)

An aerial photograph of an industrial facility, likely a power plant or refinery, showing various structures, pipes, and storage tanks. A label with an arrow points to a specific area within the facility.

Location of Boilers (T04)

Huls America Inc.
Route 297
Chestertown, Md

November 4, 1991

Interim Status Questionnaire

HÜLS AMERICA INC.

1-28

See,
The company
is correct in
their determination

November 4, 19

See me if you
want to discuss
why.

Mr. Robert L.
RCRA Programs
U.S. Environme:
Region III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

Dave F
----- Agency

Turner Place, P.O. Box 365
Piscataway
NJ 0365
981-5000
754188

Dave -
Thanks for this.
MDE told Huls in the
past that since toluene
isn't being used as solvent,
it isn't HW. Is the
toluene + MeOH a HW??

Subject: Interim Status Questionnaire
Hüls America Inc. BIF Interim Status
MDD 001890060

Dear Mr. Allen:

Hüls America Inc. has reviewed the above referenced questionnaire related to site operations at our Chestertown, Maryland facility. Answers to the applicable questions are as follows:

1. (a) Did your company ever burn RCRA hazardous waste in the boilers or industrial furnace indicated on your Part A application prior to August 21, 1991?

Yes.
- (b) Describe the waste that was burned including the EPA hazardous waste code or codes and indicate the approximate last date prior to August 21, 1991 on which the waste was burned.

The origin of the materials is from production operations. At the beginning of the process, the raw materials are charged into the reaction vessel. These raw materials include organic acids, alcohols, and toluene. The vessel is heated and an organic condensation reaction occurs joining together the acid chains with the alcohols liberating water. The toluene and water form a biphasic mixture. Some specific examples of these reactions are summarized in Table 1

Mr. Robert L. Allen, Chief
November 4, 1991
Page 2

and a general flow diagram of the production process is presented as Figure 1.

The toluene and water form a heterogeneous binary azeotrope which enables the water to be removed from the reaction vessel by distillation at approximately 84°C. The desired product is left behind in the reaction vessel as the toluene and water is removed. The toluene water mixture is first trapped in the decanter which allows for the recycle of toluene back to the reaction vessel for part of the reaction process. As the reaction is completed, the decanter is bypassed and the toluene and water is collected in the receiver. At the end of the reaction, the receiver is emptied of the water which has been in contact with toluene in the process.

The water is discharged to the wastewater treatment facility. The upper toluene layer is either reused in the process or burned as a fuel extender in the facility boilers.

Toluene is added to the reaction vessel solely for the purpose of removing the water of reaction from the desired product at a lower temperature than if the water was removed without the addition of toluene. The use of toluene is not for its solvent properties; therefore, the material is not described as an F-listed spent solvent (40 CFR 261.31). The material is also not accurately identified as a U-listed or P-listed material since it is a manufacturing process waste and is not described by any descriptions of K-listed materials (40 CFR 261.33(c), 261.33(f), 261.32). Classification of the material burned in the boilers is considered as D001 since the flash point is below 140°F.

Methanol is also generated as a by-product of reaction from the esterification of methyl benzoate. This methanol is also burned in the facility boilers and considered a D001 waste.

The last date prior to August 21, 1991 on which the waste was burned was August 20, 1991.

2. Please cite any applicable state regulations or requirements that need to be satisfied regarding the burning of hazardous waste in a BIF.

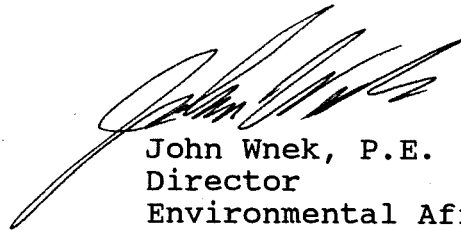
The Chestertown Facility has a Limited Facility Permit for burning waste combustible fluids in the facility boilers. An

Mr. Robert L. Allen, Chief
November 4, 1991
Page 3

example of the Maryland state approval is attached for your review.

This information is being submitted in accordance with the requirements of the US EPA. Please review this information and contact me at 908-981-5042 or Mr. Richard Gorsuch of the Chestertown facility at 301-778-1991 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "John Wnek", is written over the typed name and title.

John Wnek, P.E.
Director
Environmental Affairs

JW/ab

cc: J. Fuhrman
R. Gorsuch
J. Hodgson
P. O'Brien

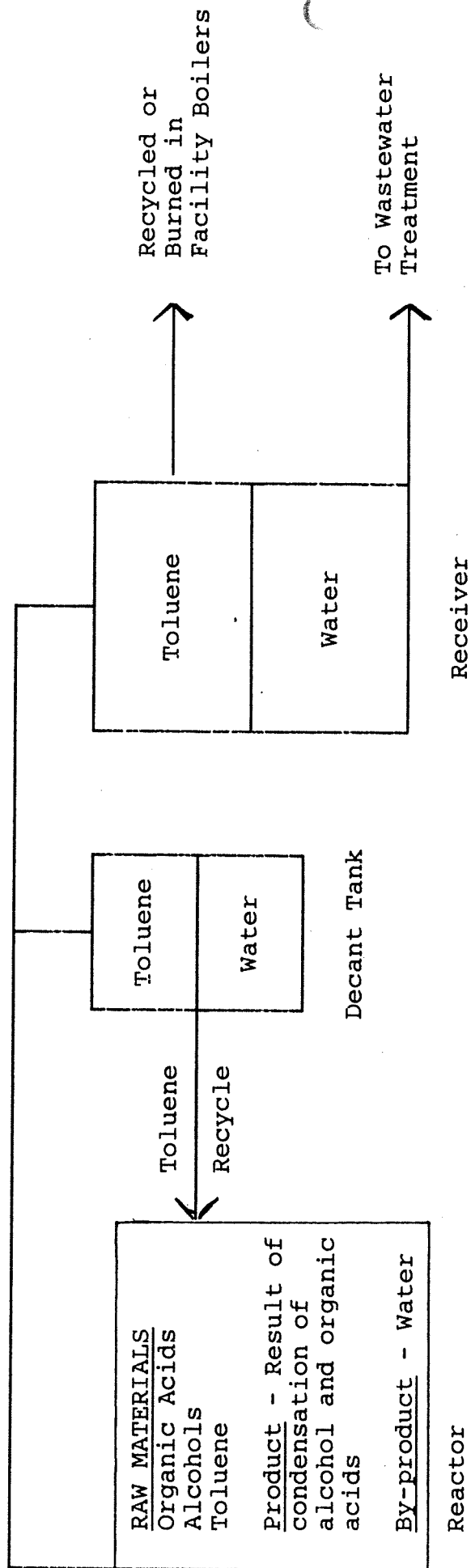
TABLE I

EXAMPLES OF REACTIONS USING TOLUENE AS AN AZEOTROPTING AGENT

<u>RAW MATERIALS</u>	<u>PRODUCTS</u>
Texanol, benzoic acid	Texanol benzoate
Butanol, maleic anhydride	Di-n-butyl maleate
Butanol, cyclohexanol, phthalic anhydride	Butyl cyclohexyl phthalate
Difunctional acids, phthalic anhydride adipic acid, butylene diol, propylene glycol	Polymers
Fatty acids (as tall oil), phthalic anhydride	Saponified fat products (referred to as alkyd coats)
Texanolm methyl benzoate	Texanol benzoate

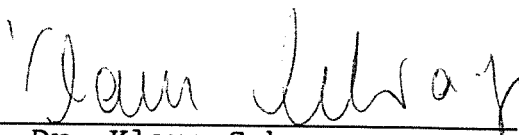
FIGURE 1

GENERAL PROCESS DIAGRAM



CERTIFICATION

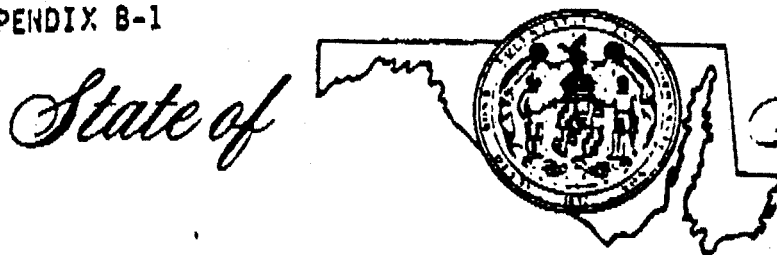
I certify under penalty of law that this document and all statements were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Dr. Klaus Schrage

October 31, 1991
Date

APPENDIX B-1



State of

Maryland

OFFICE OF ENVIRONMENTAL PROGRAMS
DEPARTMENT OF HEALTH AND MENTAL HYGIENE

201 WEST PRESTON STREET • BALTIMORE, MARYLAND 21201 • AREA CODE 301 • 368-5235
TTY FOR DEAF: Balto. Area 363-7555
D.C. Metro 565-0451



Adele Wilzack, R.N., M.S., Secretary

William M. Eichbaum, Assistant Secretary

CERTIFIED MAIL

APR 2 1987

Mario Ceprini, Ph.D.
Nuodex, Inc.
Turner Place, P.O. Box 365
Piscataway, New Jersey 08854

Dear Mr. Ceprini:

Subject: Conditional Approval of Application for Use of Waste Combustible
Fluid in the Following Boilers Located in the Nuodex, Inc. Plant in
Chestertown, Maryland

<u>Plant</u>	<u>Boiler Identification</u>	<u>Boiler Size</u>	<u>Fuel Burned (gal.)</u>	
			<u>#8</u>	<u>WCF</u>
Chestertown	Cleaver Brooks Model 200	10 MM BTU/hr. input	34,900	217,000
Chestertown	Cleaver Brooks Model 700	29 MM BTU/hr. input	266,000	0
Chestertown	Eclipse Lookout	10 MM BTU/hr. input	60,300	115,900
Chestertown	Eclipse Lookout	14 MM BTU/hr. input	49,900	125,000
Chestertown	Eclipse Lookout	14 MM BTU/hr. input	57,800	120,700

Upon consideration of the above-captioned application and the information furnished in support thereof, the Air Management Administration of the Department of Health and Mental Hygiene approves the use of waste combustible fluids as fuel in the above mentioned boilers subject to the following conditions:

June 9, 1994

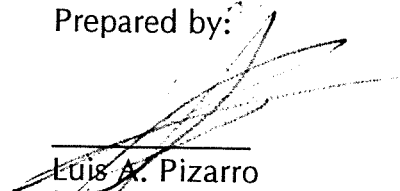
Compliance Evaluation Inspection Report



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

COMPLIANCE EVALUATION INSPECTION REPORT
December 10, 1993 Inspection
Hüls America Inc.
MDD001890060

Prepared by:


Luis A. Pizarro
Environmental Engineer
PA/DC RCRA Permits Section

Date prepared: June 9, 1994

Reviewed by:

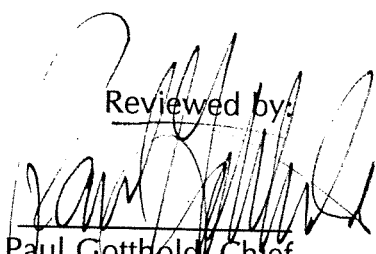

Paul Gotthold, Chief
PA/DC RCRA Permits Section

TABLE OF CONTENTS

I. Introduction	1
II. Background Information	1
A. Facility Description	1
B. Regulatory Limits	2
III. Observations and Findings	5
A. Waste Analysis	5
B. Conditions at the time of the inspection	5
C. Operating Record	6
D. Automatic Waste Feed Cut Off	7
E. Continuous Emission Monitoring System	7
F. Control of Fugitive Emissions	8
G. Storage Tanks Area	8
H. Boilers/Tanks Inspections	8
I. Residues	8
IV. Review of operating Data	8
A. Feed rates	8
B. Data Analysis	9
V. Others records Reviewed	9
VI. Outstanding Issues	10

TABLES

1. November 9, 1992 Certification of Compliance Limits	3
2. November 2, 1993 Certification of Compliance Limits	4

ATTACHMENTS

- A. List of Records
- B. BIF Peak Rate Calculations Sheets
- C. BOXCAR Algorithm
- D. BIF Feed Rate Calculations Sheets
- E. AWFCO Test Records
- F. CEM Audits
- G. Inspection Logs
- H. Residue Characterization
- I. Feed Rates Calculations
- J. CEM PS Reports

I. Introduction

Facility Inspected: Hüls America Inc.
Rt. 297
Chestertown, MD 21620

Inspection date: December 10, 1993

Arrival time: 10:20 AM

Participants

U.S. EPA

Luis A. Pizarro, Environmental Engineer
Susan Sciarratta, Environmental Engineer

Hüls America

Andrew Cullen, Environmental Supervisor
Clarence W. Dixon, Maintenance Supervisor
Robert Bishop, Instrumentation Technician

On December 10, 1993, the U.S. Environmental Protection Agency, Region III (EPA), conducted a Compliance Evaluation Inspection of Hüls America Inc. in Chestertown, MD. The purpose of this inspection was to evaluate Hüls America's compliance with the Boiler and Industrial Furnace regulations (40 CFR 266.100 et seq.). The inspection was unannounced.

II. Background Information

A. Facility Description

Hüls America manufactures monomeric and polymeric plasticizers used in colorants and coatings. In addition Hüls manufactures synthetic lubricating oils and greases. Liquid residues from the manufacturing operations are classified as liquid hazardous waste due to ignitability characteristic. Hüls personnel referred to the hazardous wastes as waste light ends (WLE).

Hüls America burns WLE's in four units: a Cleaver Brooks 10 million Btu/hr boiler, one 10 Btu/hr million Eclipse Lookout hot oil system¹ and two 14 million Btu/hr Eclipse Lookout hot oil systems. None of the units are equipped with an air pollution control system.

Each of the hot oil systems provides heat to dedicated chemical production reactors. The Cleaver Brooks boiler provides process steam and space heating for the entire facility. All the units are equipped with a parallel feeding system which allows easy switchover from WLE to fuel oil.

WLE is transferred from the manufacturing operations to a storage tank area that subsequently feeds the boilers.

The tank area consists of a horizontal 16,000 gallon tank (Tank #339) a vertical 12,000 gallon (Tank #324) and a 6,000 gallon emergency tank (Tank #321). WLE is received in Tank #339, a holding tank, from the manufacturing process. Tank #324 is used as the feed tank for each of the combustion units through a recirculating loop.

B. Regulatory Limits

On November 9, 1992 Hüls America submitted a Certification of Compliance (CoC) as required by EPA regulations. On this CoC, Hüls America certified Tier I limits for cadmium and thallium and claimed "ND" for the remaining metals and chlorine. The feed rate limits are presented in Table 1. These limits were effective until the CoC was revised on November 2, 1993.

The revised CoC was based on a site specific dispersion modeling for an Adjusted Tier I analysis for the ten metals and chlorine. The feed rate limits are presented in Table 2.

Between August 21, 1992 and November 8, 1992 Hüls America operated under a one-year extension of the August 21, 1992 CoC deadline. Pursuant to 40 CFR §266.103(c)(7) Hüls was authorized to burn hazardous waste during this period solely for the purpose of compliance testing or preparation for testing, up to a maximum of 720 operating hours.

¹ Hot oil systems 1-3 are two-pass firetube boilers.

Table 1. November 9, 1992 Certification of Compliance Limits

Maximum Feed Rates				
Constituent	Unit #1-HO [g/hr]	Unit #2-HO [g/hr]	Unit #3-HO [g/hr]	Unit CB250 [g/hr]
Ash	224.8	298	296	227
Arsenic	ND	ND	ND	ND
Antimony	ND	ND	ND	ND
Barium	ND	ND	ND	ND
Beryllium	ND	ND	ND	ND
Cadmium	0.233	0.323	0.308	0.236
Chromium	ND	ND	ND	ND
Lead	ND	ND	ND	ND
Mercury	ND	ND	ND	ND
Silver	ND	ND	ND	ND
Thallium	12.30	17.02	16.22	12.45
Chlorine	ND	ND	ND	ND
Hazardous waste feed rate	280970	372480	369513	283815

Table 2. November 2, 1993 Certification of Compliance Limits

Maximum Feed Rates				
Constituent	Unit #1-HO [g/hr]	Unit #2-HO [g/hr]	Unit #3-HO [g/hr]	Unit CB250 [g/hr]
Ash	560	743	739	567
Arsenic	2.25	2.98	2.97	2.28
Antimony	293	389	387	297
Barium	48894	64870	64548	49537
Beryllium	4.11	5.45	5.42	4.16
Cadmium	5.48	7.27	7.23	5.55
Chromium	0.81	1.08	1.07	0.82
Lead	88	117	116	89.2
Mercury	293	389	387	297
Silver	2934	3892	3873	2972
Thallium	293	389	387	297
Chlorine	1956	2595	2582	1981
Hazardous waste feed rate	279897	371354	369513	283578

III. Observations and findings

During the opening meeting Luis Pizarro presented his credentials to Mr. Andrew Cullen. Attachment A is the list of the records requested from Hüls America. Since some of these records are extensive, an example of each item was reviewed during the inspection, and arrangements were made for the delivery of records not obtained during the inspection. The records were received at the Regional office on January 11, 1994.

EPA selected random dates and requested the facility's operating record for those days. The dates selected were:

March 24, 1993
May 17 through May 24, 1993
August 28, 1993
November 25, 1993
December 10, 1993

A. Waste Analysis

Hüls America is currently implementing a monthly sampling and analysis of the WLE. The results are received about three weeks after the sample date. The analytical data is entered on a "BIF peak rate calculation" sheet to evaluate the compliance of each individual constituent with its limit. This sheet is used as the characterization of the waste until new analytical data is received. The calculations are based on the analytical results and the cumulative maximum feed rate of WLE to the four units. Mr. Cullen provided a calculation sheet for the months corresponding to the requested dates. See attachment B.

B. Condition at the time of the inspection

At 12:31 pm, the control panel for #1 Hot Oil Boiler displayed the following operating data:

WLE Feed rate	35.07 gph
CO HRA ²	7.8 ppm

At the same time, the #3 Hot Oil Boiler was being fired with No. 6 oil, and the CB-250 and #1 Hot Oil units were not being operated.

² HRA - Hourly rolling average, corrected to 7% oxygen.

All four unit are equipped with positive displacement meters to monitor the flow rate of WLE. The meters are located on the front of the units, downstream of the automatic waste feed cutoff valves.

C. Operating Records

Feed rates and CEM data are recorded by the Data Historian computer system (DHS). The DHS System utilizes a data compression technique, called BOXCAR algorithm (see Attachment C). The algorithm manages the generated operating data to only store data points when the new values fall outside a "recording limit" or the algorithm has not recorded any value for fifteen minutes. The recording limit is an absolute deviation, positive or negative, from the last recorded data point. Each parameter also has its recording trigger value, a value above which data will be recorded every fifteen seconds. Mr. Cullen provided a list (Attachment C) of the recording limits and triggers for the operating parameters effective over the period of time under evaluation. All parameters are read every fifteen seconds.

Mr. Cullen provided copies of the recorded operating records for CO instantaneous, CO minute averages, CO hourly rolling averages, oxygen and hazardous waste feed rates.

For the constituent feed rates, Mr. Cullen provided the "BIF Peak Feed Rate Calculations" sheet for each date requested (Attachment B). All the sheets show the Adjusted Tier I limits as the allowable feed rates even though these feed rate limits were not established until the CoC submitted on November 2, 1993. Mr. Cullen also provided "BIF Feed Rate Calculation" sheets dated 3/22/93 and 4/14/93 that contain Tier I feed rates limits for the metals and chlorine. See Attachment D.

Although the "BIF Peak Feed Rate Calculations" sheets verify, after the fact, that operations were conducted below the facility-wide allowable emission rates (Adjusted Tier I), it does not verify each boiler's compliance with its respective CoC limits.

According to Mr. Cullen, boiler feed rates are controlled by the Automatic Waste Feed Cut Off (AWFCO) limits which are established based on the most recent waste analysis and the boiler specific CoC limits. These are used to determine the feed rate of WLE that will not cause an exceedance of any of the constituent CoC limits. By setting up the AWFCO limit for each Boiler at the most restrictive feed rate, Hüls ensures that the boilers will not exceed any of the CoC limits.

It was noted that the waste density, in g/gal units, used in the calculations of constituents feed rates was the same for all dates reviewed.

D. Automatic Waste Feed Cut Off (AWFCO)

Mr. Bishop explained that the AWFCO system will be activated when the feed rate of WLE exceeds its limit or the CO hourly rolling average exceeds 50 ppm. For WLE feed rate the interlock set point is changed depending on the analysis of the WLE (see section III.C). The "Automatic Waste Feed Shut Off Test Record" documents the testing of the systems, the feed rate interlock value and the month of the sample it was based on.

According to Mr. Bishop the AWFCO system is tested once a week. The testing consists of lowering the set point of the interlock parameters to values below the condition at the time. In addition to the operating parameter interlocks, a malfunction of the CEM system (i.e, failed calibration, sampling pump failure) will trigger an AWFCO. Attachment E includes the copies of the "Automatic Waste Feed Shut Off Test Record" corresponding to the dates in question.

Two AWFCO valves are located in series downstream of the positive displacement meter for each unit. All four units have a similar set-up.

E. Continuous Emission Monitoring (CEM) System

Each boiler CEM system utilizes a Siemens Ultramat 5E analyzer to measure carbon monoxide (CO) and a Siemens Oxymat 5E to measure oxygen (O₂) concentration in the flue gases. The four CEMs are located in a room next to the boilerhouse.

CEM data is recorded by the DHS also using the BOXCAR algorithm.

Mr. Bishop demonstrated the calibration check of the CEM for #3 Hot Oil unit. The check lasted about 10 minutes and showed that the system was within specifications. Mr. Bishop explained that the daily calibration check is performed for zero level and span of the low range. The span of high range is electronically verified, by extrapolating the results of the calibration check for the low range span. According to Mr. Bishop the high span is tested, introducing calibration gases, only on a monthly basis.

In a letter dated January 7, 1994, Mr. Cullen stated that the computer system was being upgraded to conduct calibrations in both ranges daily.

Mr. Cullen provided copies of the daily CEM audit records. An example is included in Attachment F.

F. Control of Fugitive Emissions

According to Mr. Bishop, fugitive emissions from the combustion zone are controlled by maintaining it totally enclosed. No fugitive emissions were observed from any of the units during the inspection.

G. Storage Tank Area

Tanks #339, #324 and #321 are located in an area with concrete secondary containment. No leaks or spills were observed in the tank area during our inspection.

H. Boiler/Tanks Inspections

Hüls America records the inspection of the boilers in the "BIF Regulation Daily Inspection Log". An example form is included in attachment G. No anomalies were identified on boiler inspection sheets provided for the requested dates.

Mr. Cullen also provided copies of the "BIF Regulation Weekly Inspection log" which documents inspections of the tank area. An example is included in attachment G.

I. Residues

According to Mr. Cullen, residues (i.e bottom ash) are only removed during annual maintenance operations of the boilers. He provided a copy of the "Generator Waste Characterization Report" (attachment H) for the most recent load of residue generated. The residue was determined to be non-hazardous and in his January 7, 1994 letter Mr. Cullen stated that it was disposed of accordingly.

IV. Review of Operating Data

A. Feed rates

Attachment I, Table I.1, contains a list of the maximum recorded WLE feed rate on each date for which records were requested. On all dates feed rate was below the limit.

Tables I.2 through I.13 contain the calculation of metals, ash and chlorine feed rates compared to their respective limits for each unit. The calculation was based on the characterizations of the WLE provided in the "BIF Peak Feed Rate Calculations" and "BIF Feed Rate Calculations" sheet and the maximum feed rate of WLE for each unit.

B. Data Analysis

Although the feed rates of all constituents were below the Adjusted Tier I limits on all dates, these limits went into effect on November 4, 1993. The feed rates were below the limits established in the CoC submitted in November 9, 1992.

Hüls America obtained analyses on 3/22/93 and 4/14/93 which identified detectable levels of chromium, lead and barium. According to the CoC in effect at that time, those streams should not have been burned in the boilers.

V. Others Records Reviewed

A. Leak Detection and Repair Program

Mr. Cullen provided a copy of the "Leak Detection Monitoring Program" plan. The plan describes the procedures to be followed to monitor equipment subject to the air emissions standards for equipment leaks (40 CFR §265.1050). The plan includes an identification of the equipment, the frequency of monitoring and examples of the form to be filed as part of the implementation of the monitoring program. No leaks were observed during the inspection.

B. CEM Performance Specifications Reports

Hüls America provided documentation (attachment J) for the Calibration Error tests completed October 7, 1993 and documentation of the annual Performance Specification (PS) test completed November 18, 1993. Table 3-2 depicts the test results. These results showed that the system performed within the established specifications of the regulation.

VI. Outstanding Issues

Issues requiring follow-up from the December 10 inspection and the subsequent analysis are:

Waste Analysis

- The use of "previous month" analytical data may not provide sufficient assurance that the facility will comply with its constituent feed rate limits at all times. It is uncertain to what extent the existing procedure accounts for variability of constituent concentrations within the waste stream. Any facility, such as Hüls America, that does not obtain analytical results for all waste feeds (i.e. every batch or daily analysis for continuously burned wastes) before they are burned should be able to demonstrate, through a statistically valid evaluation of constituent variability, at least 95% confidence that no constituent feed rate limit will be exceeded at any time.

Compliance based on the November 2, 1992 CoC

- Hüls America obtained analyses on 3/22/93 and 4/14/93 of the WLE which identified detectable levels of chromium, lead and barium. According to the CoC then in effect, those streams should not have been burned.

Operating Records

- In order to be considered a "continuous" monitoring and recording device under the BIF rule, a monitor must continuously sample the regulated parameter, evaluate the detector response at least every 15 seconds, and record the average value at least every minute. By using the BOXCAR algorithm, Hüls America does not record values every minute. As a result Hüls America does not meet the definition of continuous monitoring.

Continuous Emission Monitoring System

- Calibration check of high span of the carbon monoxide CEM was performed once a month. It was not performed on the daily basis as required. (According to Mr. Cullen, this was being corrected as of January 7, 1994)

Others

- Hazardous waste feed rate limits in the CoC should be in the same units (i.e gph) as continuous monitoring records.

August 25, 1994

Correspondence Regarding Variation in Normal Waste Management



HÜLS AMERICA INC.

P.O. Box 120
Chestertown
MD 21620
Tel: (410) 778-1991
FAX: (410) 778-5538

August 25, 1994

Maryland Department of the Environment
Hazardous Waste Program Administrator
2500 Broening Highway
Baltimore, MD 21224

Attention: Harold L. Dye, Jr.

Dear Mr Dye:

I would like to inform you of a recent event which would represent a variation in our normal management of hazardous waste in tanks. Typically our D001 waste is transferred only from TK-325 to TK-339 and then to either TK-324 or TK-321. Apparently on August 20 our production department experienced some filtration problems with a particular batch of D001 waste and was forced to transfer it to TK-76 which was empty. After being told of this action on August 22 I instructed the production department to label the tank appropriately and perform daily inspections for leaks or problems. We will continue these actions until the material is transferred out of TK-76, which we expect to happen by the end of the month, back into our hazardous waste handling system.

If you have any questions concerning this matter please feel free to contact me at (410) 778-7188.

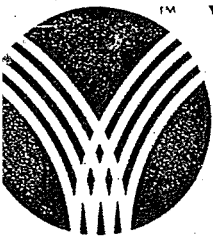
Sincerely,

Andrew W. Cullen
E&RA Supervisor

cc: S. Sciarratta (U.S. EPA, Region III)
J. Wnek (Corp. E&RA)
BIF file

December 5, 1994

Correspondence Regarding Change of Ownership from Huls to Velsicol



VELSICOL CHEMICAL CORPORATION

2603 CORPORATE AVENUE
SUITE 100
MEMPHIS, TN 38132
(901) 345-1788

9968

December 5, 1994

Mr. Harold L. Dye, Jr.
Hazardous Waste Program Administrator
Maryland Department of the Environment
2500 Broening Highway
Baltimore, Maryland 21224

RECEIVED
PA/DC SECTION

DEC 21 1994

EPA REGION III

Mr. Gary Gross
United States Environmental Protection Agency
Region III
841 Chestnut Street
Philadelphia, Pennsylvania 19107

Re: Huls America
Chestertown Maryland
EPA ID# MDD001890060

Dear Sirs:

Velsicol Chemical Corporation (Velsicol) intends to purchase the property and operating facilities currently owned and operated by Huls America, Inc. (Huls) located at Chestertown, Maryland. Velsicol will become the owner and operator effective on or about December 15, 1994.

Enclosed is a "Hazardous Waste Permit Application Part A" (EPA Form 8700-23) indicating the change in operation and ownership. Please note that the information on the Part A, other than that relating to new ownership and operation information, is identical to that currently on file with your offices and provided to you previously by Huls. Velsicol believes all the information submitted to be true, accurate, and complete but is not as yet familiar enough with that information and the facility to be able to certify under penalty of law to that effect.

Please contact Mr. Andy Cullen, Environmental Manager, or me at 410-778-1991 with any questions you may have.


Sincerely,

David J. Boswell
Plant Manager

DJB/slm(site801MD-EPA.ltr)

Enclosure

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

For EPA Regional Use Only		 United States Environmental Protection Agency Washington, DC 20460 Hazardous Waste Permit Application Part A <i>(Read the Instructions before filling in)</i>	
Date Received Month Day Year			
I. Installation's EPA ID Number (Mark X in the appropriate box)			
<input type="checkbox"/> A. First Part A Submission		<input type="checkbox"/> B. Part A Amendment #	
C. Installation's EPA ID Number		D. Secondary ID Number (if applicable)	
M D D O O 1 8 9 0 0 6 0			
II. Name of Facility			
V E L S T C O I L C H E M I C A L C O R P O R A T I O N			
III. Facility Location (Physical address not P.O. Box or Route Number)			
A. Street			
R O U T E 2 9 7			
Street (Continued)			
City or Town		State	Zip Code
C H E S T E R T O W N		M D	2 1 6 2 0 -
County Code	County Name		
	K E N T		
B. Land Type	C. Geographic Location		D. Facility Existence Date
(Enter code)	LATITUDE (Degrees, Minutes & Seconds) LONGITUDE (Degrees, Minutes & Seconds)		Month Day Year
P	3 9 1 5 5 0 7 6 0 5 3 0		1 9 5 8
IV. Facility Mailing Address			
Street or P.O. Box			
R O U T E 2 9 7			
City or Town		State	Zip Code
C H E S T E R T O W N		M D	2 1 6 2 0 -
V. Facility Contact (Person to be contacted regarding waste activities at facility)			
Name (Last)		(First)	
C U L L E N		A N D Y	
Job title		Phone Number (Area Code and Number)	
E N V R . M A N A G E R		4 1 0 - 7 7 8 - 7 1 8 8	
VI. Facility Contact Address (See Instructions)			
A. Contact Address		B. Street or P.O. Box	
Location Mailing Other			
Y			
City or Town		State	Zip Code
			-

EPA Form 8700-23 (Rev. 11-30-93) Previous edition is obsolete. - 2 of 7 -

Please print or type with ELITE type (2 characters per inch) in the unshaded areas only

EPA ID Number (Enter from page 1)										Secondary ID Number (Enter from page 1)													
M	D	D	0	0	1	8	9	0	0	6	0												
XI. Nature of Business (Provide a brief description)																							

THE VELSICOL CHEMICAL CORP. CHESTERTOWN, MARYLAND FACILITY MANUFACTURES MONOMERIC AND POLYMERIC PLASTICIZERS AND INTERMEDIATES USED IN COLORANTS AND COATINGS. ADDITIONALLY SYNTHETIC LUBRICATING OILS AND GREASES ARE MANUFACTURED. THE FACILITY IS CLASSIFIED AS AN "ON SITE" OPERATION FOR BURNING HAZARDOUS WASTE GENERATED ON-SITE.

III. Process Codes and Design Capacities

- PROCESS CODE: Enter the code from the list of process codes below that best describes each process to be used at the facility. Thirteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), describe the process (including its design capacity) in the space provided in item XIII.
- PROCESS DESIGN CAPACITY: For each code entered in column A, enter the capacity of this process.
1. AMOUNT: Enter the amount. In a case where design capacity is not applicable (such as in a closure, post-closure or enforcement action), enter the total amount of waste for that process.
2. UNIT OF MEASURE: For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.
- PROCESS TOTAL NUMBER OF UNITS: Enter the total number of units used with the corresponding process code.

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	<u>Disposal:</u>				
D79	Underground Injection	Gallons; Liters; Gallons Per Day; or Liters Per Day	T87	Smelting, Melting, Or Refining Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
D80	Landfill	Acres-foot or Hectare-meter	T88	Titanium Dioxide Chloride Process	
D81	Land Treatment	Acres or Hectares	T89	Oxidation Reactor	
D82	Ocean Disposal	Gallons Per Day r Liters Per Day	T90	Methane Reforming Furnace	
D83	Surface Impoundment	Gallons or Liters	T91	Pulping Liquor Recovery Furnace	
D99	Other Disposal	Any Unit of Measure Listed Below	T92	Combustion Device Used in The Recovery Of Sulfur Values From Spent Sulfuric Acid	
	<u>Storage:</u>		T93	Halogen Acid Furnaces	
S01	Container (Barrel, Drum, Etc.)	Gallons or Liters	T94	Other Industrial Furnaces Listed In 40 CFR §260.10	Cubic Yards or Cubic Meters
S02	Tank	Gallons or Liters		Containment Building-Treatment	
S03	Waste Pile	Cubic Yards or Cubic Meters		<u>Miscellaneous (Subpart X):</u>	
S04	Surface Impoundment	Gallons or Liters	X01	Open Burning/Open Cationation	Any Unit of Measure Listed Below Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; or Kilograms Per Hour
S05	Drip Pad	Gallons or Liters	X02	Mechanical Processing	
S06	Containment Building-Storage	Cubic Yards or Cubic Meters	X03	Thermal Unit	
S99	Other Storage	Any Unit of Measure Listed Below	X04	Geologic Repository	
	<u>Treatment:</u>		X99	Other Subpart X	Cubic Yards or Cubic Meters Any Unit of Measure Listed Below
T01	Tank	Gallons Per Day or Liters Per Day			
T02	Surface Impoundment	Gallons Per Day or Liters Per Day			
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; or Btu's Per Hour			
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour			
T80	Boiler	Gallons or Liters			
T81	Cement Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour			
T82	Lime Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour			
T83	Aggregate Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour			
T84	Phosphate Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour			
T85	Coke Oven	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour			
T86	Blast Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour			

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
Gallons	G	Short Tons Per Hour	D	Cubic Yards	Y
Gallons Per Hour	E	Metric Tons Per Hour	W	Cubic Meters	C
Gallons Per Day	U	Short Tons Per Day	N	Acres	B
Liters	L	Metric Tons Per Day	S	Acres-foot	A
Liters Per Hour	H	Pounds Per Hour	J	Hectares	Q
Liters Per Day	V	Kilograms Per Hour	R	Hectare-meter	F
				Btu's Per Hour	I

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA ID Number (Enter from page 1)												Secondary ID Number (Enter from page 1)											
<div> <div>Y</div> <div>D</div> <div>D</div> <div>0</div> <div>0</div> <div>1</div> <div>8</div> <div>0</div> <div>0</div> <div>0</div> <div>6</div> <div>0</div> </div>																							

XII. Process Codes and Design Capabilities (Continued)

Line Number	A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY		C. Process Total Number Of Units	D. Description Of Process
		1. Amount (Specify)	2. Unit Of Measure (Enter code)		
1	S 0 2	3 3 7 8 8	G	0 0 1	
2	T 0 4	98	E	001	
3	T 0 4	78	E	001	
4	T 0 4	117	E	002	
5					
6					
7					
8					
9					
10					
11					
12					
13					

NOTE: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in Item XIII.

XIII. Other Processes (Follow instructions from Item XII for D99, S99, T04 and X99 process codes).

Line Number (Enter as in Item XII)	A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY		C. Process Total Number Of Units	D. Description Of Process
		1. Amount (Specify)	2. Unit Of Measure (Enter code)		
1	T 0 4	98	E	001	INDUSTRIAL BOILER
2	T 0 4	78	E	001	INDUSTRIAL BOILER
3	T 0 4	117	E	002	INDUSTRIAL BOILER
4					
5					

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA ID Number (Enter from page 1) <div style="border: 1px solid black; padding: 2px;">M D D 0 0 1 8 9 0 0 6 0</div>	Secondary ID Number (Enter from page 1) <div style="border: 1px solid black; padding: 2px;"></div>
--	---

XIV. Description of Hazardous Wastes

A. EPA HAZARDOUS WASTE NUMBER - Enter the four-digit number from 40 CFR, Part 261, Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261, Subpart D, enter the four-digit number(s) from 40 CFR, Part 261, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A, estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B, enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES**1. PROCESS CODES**

For listed hazardous waste: For each listed hazardous waste entered in column A, select the code(s) from the list of process codes contained in item XII A, on page 3 to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in item XII A, on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

- Enter the first two as described above.
- Enter "000" in the extreme right box of item XIV-D(1).
- Enter in the space provided on page 7, item XIV-E, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form (D(2)).

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

- Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
- In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) in that line enter "Included with above" and make no other entries on that line.
- Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM XIV (shown in line numbers X-1, X-2, X-3, and X-4 below): A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number	A. EPA HAZARD WASTE NO. (Enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESS	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				Included With Above

EPA ID Number (Enter from page 1)										Secondary ID Number (Enter from page 1)									
M	D	D	0	0	1	8	9	0	0	6	0								
XIV. Description of Hazardous Wastes (Continued)																			
Line Number	A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES												
							(1) PROCESS CODES (Enter code)						(2) PROCESS DESCRIPTION (If a code is not entered in D (1))						
1	D	0	0	1	4,800,000	P	T	0	4										
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			
25																			
26																			
27																			
28																			
29																			
30																			
31																			
32																			
33																			

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA ID Number (Enter from page 1)												Secondary ID Number (Enter from page 1)											
M	D	D	0	0	1	8	9	0	0	6	0												

XV. Map

Attach to this application a topographic map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (see instructions for more detail). PREVIOUSLY SUPPLIED

XVII. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

XVIII. Certification(s)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner Signature	Date Signed
Name and Official Title (Type or print)	
Owner Signature	Date Signed
Name and Official Title (Type or print)	
Operator Signature	Date Signed
Name and Official Title (Type or print)	
Operator Signature	Date Signed
Name and Official Title (Type or print)	

XIX. Comments

Note: Mail completed form to the appropriate EPA Regional or State Office. (Refer to instructions for more information)

December 14, 1994

Correspondence Regarding Velsicol Acquiring Huls

12-14-94

Rec'd
12-30-94
11:15PM

VIA DHL

Maria
~~B. Allen~~
John H.

Regional Administrator
U.S. Environmental Protection Agency
Region III
Chestnut Street
Philadelphia, Pennsylvania 19107

Dear Sir:

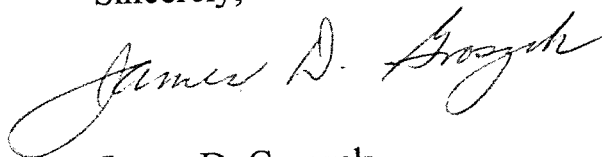
On December 17, Velsicol Chemical Corporation will acquire the former Hüls America, Inc. manufacturing facility located at 10380 Worton Road, Chestertown, Maryland 21620, EPA I.D. No. MDD001890060.

In order to demonstrate financial responsibility for liability coverage for sudden accidental occurrences at the facility, the attached documents are in support of:

1. A copy of a letter signed by the Chief Financial Officer used previously in 1994 to establish financial responsibility.
2. A copy of the independent auditor's report.
3. A copy of the special report by the independent auditor in which they followed procedures specified in subpart H of 40 CFR part 264 and 265.

Should you have any questions, please call me.

Sincerely,



James D. Groszek
Controller

Enclosures



Printed on Recycled Paper

12-14-94

Rec'd
12-30-94
11:15PM

VIA DHL

Maria
~~B. Allen~~
John H.

Regional Administrator
U.S. Environmental Protection Agency
Region III
Chestnut Street
Philadelphia, Pennsylvania 19107

Dear Sir:

On December 17, Velsicol Chemical Corporation will acquire the former Hüls America, Inc. manufacturing facility located at 10380 Worton Road, Chestertown, Maryland 21620, EPA I.D. No. MDD001890060.

In order to demonstrate financial responsibility for liability coverage for sudden accidental occurrences at the facility, the attached documents are in support of:

1. A copy of a letter signed by the Chief Financial Officer used previously in 1994 to establish financial responsibility.
2. A copy of the independent auditor's report.
3. A copy of the special report by the independent auditor in which they followed procedures specified in subpart H of 40 CFR part 264 and 265.

Should you have any questions, please call me.

Sincerely,

James D. Groszek

James D. Groszek
Controller

Enclosures

March 21, 1995

Correspondence Regarding Omission on Notification of Hazardous Waste Activity Form



VELSICOL
CHEMICAL CORPORATION

March 21, 1995

Ms. Harriet Morrell
General Permits Section
U.S.E.P.A
REGION III
841 Chestnut Building
Philadelphia, PA 19107

RE: Omission on Notification of Hazardous Waste Activity

Dear Ms. Morrell:

I am sorry for any inconvenience our omission may have caused. I have attached a completed copy along with the original form you sent us.

If you have any questions please feel free to contact me at 410-778-1991.

Sincerely,

Andrew W. Cullen
SH&E Manager

CC: ERA file 136.000

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III

841 Chestnut Building
Philadelphia, Pennsylvania 19107

Re: Notification of Hazardous Waste Activity:

3-15-95

Dear Hazardous Waste Handler:

The U.S. Environmental Protection Agency (EPA) has received your notification form, which you filed pursuant to Section 3010 of the Resource Conservation and Recovery Act, as amended.

We have reviewed the form and are returning it to you for clarification or missing information as indicated below:

- ☐ Location address inappropriate; complete street address required.
- ☒ Required items which are missing are circled in red.
- ☐ Signature/date missing.
- ☐ The form was illegible. A new form is enclosed.

Please return the complete form together with this letter to the address indicated in the letterhead no later than _____.

EPA will consider you as having not notified and in violation of Section 3010 of the Act if you do not complete and return this form by the date indicated.

If you have any questions pertaining to the Notification Form call (215) 597-3884.

Sincerely,

Harriet Morrell (3HW52)

Harriet Morrell for Pat Gaughan
Environmental Protection Assistant
General Permits Section (3HW52)

Enclosure

RECEIVED
GENERAL STATE SECTION

MAR 29 1995

EPA, R3

formerly HILLS America

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0028 Expires 9-30-96
GSA No. 0246-EPA-OT

Please refer to the Instructions for Filing Notification before completing this form. The information requested here is required by law (Section 3010 of the Resource Conservation and Recovery Act).



Notification of Regulated Waste Activity

United States Environmental Protection Agency

Date Received
(For Official Use Only)

I. Installation's EPA ID Number (Mark 'X' in the appropriate box)

☐

A. First Notification

☒

B. Subsequent Notification
(Complete item C)

C. Installation's EPA ID Number

M D D 0 0 1 8 9 0 0 6 0

II. Name of Installation (Include company and specific site name)

V E L S I C O L C H E S T E R T O W N P L A N T

III. Location of Installation (Physical address not P.O. Box or Route Number)

Street

1 0 3 8 0 W O R T O N R O A D

Street (Continued)

City or Town

C H E S T E R T O W N

State

M D

Zip Code

2 1 6 2 0 - 0 1 2 0

County Code

County Name

K E N T

IV. Installation Mailing Address (See Instructions)

Street or P.O. Box

P O B O X 1 2 0

City or Town

C H E S T E R T O W N

State

M D

Zip Code

2 1 6 2 0 - 0 1 2 0

V. Installation Contact (Person to be contacted regarding waste activities at site)

Name (Last)

C U L L E N

(First)

A N D R E W

RECEIVED

GENERAL STATE SECTION

Job Title

S H & E M A N A G E R

Phone Number (Area Code and Number)

4 1 8 - 7 7 8 - 1 9

MAR 14 1995

VI. Installation Contact Address (See Instructions)

A. Contract Address Location Mailing Other

☐ ☒ ☐

B. Street or P.O. Box

P O B O X 1 2 0

City or Town

C H E S T E R T O W N

State

M D

Zip Code

2 1 6 2 0 - 0 1 2 0

VII. Ownership (See Instructions)

A. Name of Installation's Legal Owner

V E L S I C O L C H E M I C A L C O R P O R A T I O N

Street, P.O. Box, or Route Number

1 0 4 0 0 W . H I G G I N S R O A D , S U I T E 6 0 0

City or Town

R O S E M O N T

State

I L

Zip Code

6 0 0 1 8 - 3 7 1 3

Phone Number (Area Code and Number)

7 0 8 - 2 9 8 - 9 0 0 0

B. Land Type

P

C. Owner Type

P

D. Change of Owner Indicator

Yes

X

No

(Date Changed) Month Day Year

1 2 1 6 9 4

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

ID - For Official Use Only

VIII. Type of Regulated Waste Activity (Mark 'X' in the appropriate boxes; Refer to Instructions)

A. Hazardous Waste Activity

1. Generator (See Instructions)
 - ☒ a. Greater than 1000kg/mo (2,200 lbs.)
 - ☐ b. 100 to 1000 kg/mo (200-2,200 lbs.)
 - ☐ c. Less than 100 kg/mo (220 lbs.)
2. Transporter (Indicate Mode in boxes 1-5 below)
 - ☐ a. For own waste only
 - ☐ b. For commercial purposes

Mode of Transportation

- ☐ 1. Air
- ☐ 2. Rail
- ☐ 3. Highway
- ☐ 4. Water
- ☐ 5. Other - specify

3. Treater, Storer, Disposer (at installation) Note: A permit is required for this activity; see Instructions.

4. Hazardous Waste Fuel

- ☐ a. Generator Marketing to Burner
- ☐ b. Other Marketers
- ☐ c. Boiler and/or Industrial Furnace
 - ☐ 1. Smelter Deferral
 - ☐ 2. Small Quantity Exemption
- ☐ 1. Utility Boiler
- ☐ 2. Industrial Boiler
- ☐ 3. Industrial Furnace
- ☐ 5. Underground Injection Control

B. Used Oil Recycling Activities

1. Used Oil Fuel Marketer
 - ☐ a. Marketer Directs Shipment of Used Oil to Off-Specification Burner
 - ☐ b. Marketer Who First Claims the Used Oil Meets the Specifications
2. Used Oil Burner - Indicate Type(s) of Combustion Device(s)
 - ☐ a. Utility Boiler
 - ☐ b. Industrial Boiler
 - ☐ c. Industrial Furnace
3. Used Oil Transporter - Indicate Type(s) of Activity(ies)
 - ☐ a. Transporter
 - ☐ b. Transfer Facility
4. Used Oil Processor/Re-refiner - Indicate Type(s) of Activity(ies)
 - ☐ a. Process
 - ☐ b. Re-refine

IX. Description of Hazardous Wastes (Use additional sheets if necessary)

A. Characteristics of Nonlisted Hazardous Wastes. (Mark 'X' in the boxes corresponding to the characteristics of nonlisted hazardous wastes your installation handles; See 40 CFR Parts 261.20 - 261.24)

1. Ignitable (D001) ☒
2. Corrosive (D002) ☐
3. Reactive (D003) ☐
4. Toxicity Characteristic (List specific EPA hazardous waste number(s) for the Toxicity characteristic contaminant(s))

B. Listed Hazardous Wastes. (See 40 CFR 261.31 - 33; See Instructions if you need to list more than 12 waste codes.)

1 U 0 6 9	2 U 1 9 0	3 U 0 2 8	4 F 0 0 3	5 F 0 0 5	6
7	8	9	10	11	12

C. Other Wastes. (State or other wastes requiring a handler to have an I.D. number; See Instructions.)

1 M D 0 1	2	3	4	5	6
--------------	---	---	---	---	---

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature

Name and Official Title (Type or print)

Date Signed

David J. Boswell, Plant Manager

2/23/95

XI. Comments

Note: Mail completed form to the appropriate EPA Regional or State Office. (See Section III of the booklet for addresses.)

August 14, 1995

Trial Burn Observation Report

Kearney/Centaur Division
A.T. Kearney, Inc.
215 North Presidential Boulevard
Bala Cynwyd, Pennsylvania 19004
610 617 8980
Facsimile 610 617 8999

Management
Consultants

RZ1-R03024.01-FD-038

August 14, 1995

ATKEARNEY

Ms. Donna Saunders
Regional Project Officer
U.S. Environmental Protection Agency
Region III (3HW-61)
841 Chestnut St.
Philadelphia, PA 19107

Reference: EPA Contract No. 68-W4-0013; EPA Work Assignment No. R03024; BIF
CoC Reviews for Multiple Facilities; Velsicol Trial Burn Observation Report

Dear Ms. Saunders:

Enclosed please find the Trial Burn Observation Report for Velsicol Chemical Company, located in Chestertown, Maryland. The deliverable has been provided on a diskette in WordPerfect 5.1, as well as in hard copy. In addition, field notes of the site visit have been enclosed with this deliverable.

The trial burn observation occurred from July 31, 1995 through August 3, 1995. Ms. Susan Sciaratta, EPA Region III, observed the first day trial burn. Ms. June Dreith from A.T. Kearney was present for the entire trial burn. The trial burn was conducted on all four units (3 hot oil heaters and one boiler) and was conducted to recertify the units for BIF Certification of Compliance (CoC). Three runs were initially scheduled each day, with each unit's test being completed each day. A minor modification in the schedule was made on Tuesday night, due to an incident. The factors associated with this decision are discussed later in the report.

The re-certification was conducted to modify the particulate matter emission. The test was conducted utilizing a spiked material of dibutyl tin which was added to the waste tank. Dibutyl tin was added to the waste to increase the ash content of the waste. EPA Method 5 (40 CFR Part 60, Appendix A) was used to determine the particulate emissions from the stacks. Standard velocity flow measurements were established on each stack prior to each day's runs. EPA Method 3 was used to determine the level of O₂ and CO₂ contained in the stack emission at the time of the stack sampling. These constituents were continuous samples, using a Tedlar bag, which were analyzed on-site using the Orsat method.

In addition to observing the sampling trains, the sampling of hazardous waste was observed at least once per day. The operations of the CEMs from the control room were also observed.

The level of effort maintained during the trial burn observation was as follows:

LEVEL OF EFFORT

ACTIVITY

● Intense	Leak check on sampling train
● Intense	Leak test on pitot tubes
● Moderate	Assembly of and sample recovery from train
● Moderate	Observation of Orsat operation
● Moderate	Waste light ends sampling
● Light	Operations of the train during traverse points
● Light	Control room operations

The following is a brief discussion of the observations made by Ms. Dreith during the trial burn at Velsicol.

RUNS #1 - #3, MONDAY 7/31/95, HOT OIL UNIT #1

Ms. Dreith observed the velocity flow run which was completed at the start of each day, prior to the Method 5 runs. She also noted that the nipple length on the stack ports were different sizes, with one port being approximately 2 1/2 inches longer than the other port. Because of this observation, the sampling team re-marked the sampling probe in order to ensure that the correct traverse points were used.

The Method 5 test for run #1 started at approximately 10:00 a.m.; run #2 was started at approximately 12:00 noon, and the last run was started at approximately 3:10 p.m. The pitot tube, probe and nozzle were visually examined to ensure the equipment was properly aligned and was in good order (no marring, burrs, etc.). Pre- and post-leak tests on the train and the pitot tubes were performed during all three runs. Leak tests for the train were conducted at the highest vacuum, usually for these tests around 5-6 inches of mercury. It should be noted that a leak test between port changes was NOT conducted by the sampling team. While not required, mid-test leak tests are often conducted. All (initial and final) leak tests passed. Waste flow rates for all three runs were in the range of 64 to almost 70 gallons per hour. Other sampling procedures which were observed and appeared to be adequate included sampling flowrate adjustment, recordkeeping by the train sampling team, probe and heater box temperatures. When observed, this temperature appeared to be maintained between the required temperature of $248 \pm 25^{\circ}\text{F}$.

EPA Method 3 Orsat test procedures were also observed after each of the runs. Specific CO_2 and O_2 levels obtained during each run can be obtained from the field logbook included with this report.

Ms. Donna Saunders
August 14, 1995
Page 3

Sample recovery of the sampling train for each run was also observed. Once the train had sufficiently cooled, the filter was removed, ends covered, and the filter placed in a specially designed carrying case which handled all three filters. The sample nozzle and probe were then rinsed and brushed three times using an HPLC acetone rinse. The acetone rinse was placed in a bottle for later recovery.

The waste sampling procedure was also observed during this first run. The waste sample was taken in the boiler room at approximately 10:21 a.m., from a sampling port next to hot oil unit #1. The sample, which was to be analyzed for ash, was placed in a one-liter amber bottle and taken into building 11A (where the CEMs are located). Once the bottle was transported to the CEM room, the sample was labelled. A chain-of-custody form was completed by Mr. Andy Cullen and Mr. Bob Bishop of Velsicol. The sampling procedure for runs #2 and #3 were not observed.

One issue that was brought to the attention of the facility by the sampling personnel was the lack of port access for the next three stacks. It appears that the CEMs lines were placed in one of the port locations on each of the three stacks. The probe was not able to complete the traverses without interference from the CEM lines. The facility decided to construct another port hole in each of the other three stacks. This task was completed on Monday, prior to the next scheduled sampling day.

Another issue which was noted during run #2 was that the CEMs and the Orsat numbers for CO₂ and O₂ were not consistent. During a discussion between Ms. Sciarratta of EPA, facility representatives and the sampling team engineer, it was decided to use the Orsat results from run #3 for mol. wt., and use the CEMs to correct the particulate from each run.

RUNS #1 - #3, TUESDAY 8/1/95-UNIT #3

The initial run started at approximately 9:17 a.m., but was interrupted due to a boiler accident which occurred at 9:25 a.m. At the time, three persons were on the roof of the boiler room building to observe the emission sampling of hot oil unit #3. Sampling had begun at 9:17 a.m. after the velocity test run had been completed. At 9:25 a.m. the individuals on the roof heard a "boom" from the boiler stack which was being tested. At that time all three individuals, including Ms. Dreith, started to run from the immediate area. During that time, the boiler emissions were dark, and small parts of the boiler lining and small chunks of the refractory brick were being emitted out of the stack. This happened rather quickly. Once the stack stopped belching, the inspection group proceeded down off the roof. Upon arrival in the boiler room, it was determined that the boiler operator (Mr. Bob Bishop) was injured, and had sustained 2nd and 3rd degree burns.

Ms. Donna Saunders
August 14, 1995
Page 4

The facility is formally investigating the incident and should be contacted for a detailed description. However, it appears the boiler flash-back was caused by several situations which all happened at the same time. According to one of the boiler operators, the boiler operator was in the process of taking a RCRA sample when a drop in pressure caused an interlock to close the fuel flow. The operator, who had already started the sampling manually, opened the valve back-up. He had already started to sample, and he had drained the lines into a 5-gallon pail stored below the sampling area to purge the line. The unit was on maximum fire and the bricks of the unit were extremely hot. The sampling location is located only about 18 inches from the air intake area for the boiler, so when the valve was turned back on to re-fire, the hot bricks ignited the vapors from the drain pail and flashed back.

A safety investigation meeting was held at 10:30 a.m.

The unit was brought slowly back on-line with the stack sampling beginning at 12:50 p.m. Based on the above incident, the hazardous waste sampling location was moved from the boiler room to a location by the hazardous waste storage tank. This tank is a recirculating tank which directly feeds the waste to the boiler and the hot oil units. Based on the above problem, it appeared to be an acceptable alternate location. The sampling procedures observed at the new location were completed according to RCRA procedures. This sample was taken at 1:31 p.m., and proper chain-of-custody forms were completed once the sample was taken back to the CEM room.

Runs #2 and #3 began at approximately 3:00 p.m. and 4:51 p.m., respectively. All initial and final leak tests on the sampling trains and the pitot tubes passed. The stack sampling procedures specified the previous day were again observed and were completed according to the trial burn plan. Waste flow rates during all three sampling runs were between 100 to 101 gallons per hour.

During these runs, the filters from the EPA Method 5 runs were observed to be extremely dark, and the acetone rinse appeared to have the presence of particulates. Because of this observation, it was determined by the facility and the sampling team to conduct a fourth run Tuesday morning, 8/3/95, on this unit.

RUN #4, WEDNESDAY 8/2/95, UNIT #2

The sampling train started at approximately 9:56 a.m. Start time on the unit was delayed due to some operational problems with getting the unit up to temperature. Both the initial and final leak tests on the train passed.

Ms. Donna Saunders
August 14, 1995
Page 5

RUNS #1 - #3, WEDNESDAY, 8/2/95, UNIT #3

Due to production concerns, it took until approximately 2:00 p.m. to get the unit on-line and up to temperature. Stack sampling started at approximately 2:30 p.m. Sampling time for this unit was somewhat longer, with 4 minutes per traverse point (16 points) and a total sampling time of 64 minutes. Waste flow rates during all three runs was between 99 and 100 gallons per hour. Sampling procedures were observed for all three runs and appeared to be acceptable. Initial and final leak tests for all runs on unit #3 passed. Runs #2 and #3 start times were 4:10 p.m. and 6:05 p.m., respectively. Orsat and sample recovery procedures were observed and acceptable.

Waste sampling procedures were observed at 2:41 p.m. and 4:35 p.m., and appeared to be in accordance with the trial burn plan.

RUNS #1 - #3, THURSDAY, 8/3/95, UNIT #4 (BOILER #1)

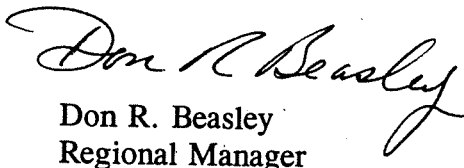
The EPA Method 5 test started at 9:45 a.m. There were 8 traverse points with 9 minutes per point with a total time of 72 minutes per run. Runs two and three started at 11:30 a.m. and 1:15 p.m., respectively. The waste flow rate for the boiler was approximately 71 to 72 gallons per hour. Runs were uneventful, and waste sampling and recovery procedures went well. All initial and final leak tests passed.

SUMMARY

In summary, with the exception of the incident that occurred on Tuesday, and the subsequent sampling of that unit (#2) which appears to have very high particulate loading, the sampling went fairly well.

Please feel free to contact me or Bert OConnell, the A.T. Kearney WAM, at 703/739-4742.

Sincerely,

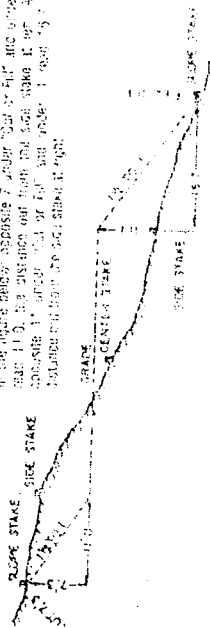

Don R. Beasley
Regional Manager

cc: S. Sciarratta, EPA Region III
W. Jordan, Central Files
W. OConnell, ATK WAM
J. Dreith, ATK

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any width. Side Slopes 1½ to 1.

if the wire being exposed 7 under "cut off" and under "cut on" the distance cut from the end stake is 197' 4 1/2" approximately 1' shorter than the "cut off" and under "cut on" the distance cut from the end stake is 198'.

[illegible]

7/31

Velocity
Drill #1

max flow rate 75 gpm / in

present rate 340 gal. 23

observed the testing of the CEMs at max rate

Leak test on pilot O

both side O for 15 sec.

3.56 Velocity flow reading

in #2 pilot location.

There may be a problem with

the CEM location interference

with the probe and the vel readings

1 .20 728 (F)

2 .22 735

3 .21 734

4 .15 724

5 .16 705 = 6,000 ACFM

6 .14 700

part 6
#3 1 .19 737

2 .20 731 Ave. 156

3 .20 734 720

4 .19 736 5.4302

5 .18 735

6 .15 655

CONTENTS

DATE

REFERENCE

NOT

oil unit #1

The nipple case not the
same size so the port location
is not the same

- 2'2". This was brought to the
attention of the sampling team.
Used to tape for #2 port

Arstone River, 3 time in pipe
9.18

Nozzle .376 size

The nozzle was placed on the line
linked - 8K.

Leak test the line vac 10
0.02 held for 1 min.

Debit Bag

traverse point 5 min.

first point in at 2:10 PM had to
stop because of incorrect temperature
it took 38.5 min at 700 before
744.1

10:02 starting

7/13

page 3 of 26

WLE sampled Rem #1, Unit H.O #1
taking dibutyl acetate to ↑
the Ash, Rem #15 and #15 -
115 to 15 metals were below
detectable

using same tank
one sample per run.
Flow of CEM; operation at 10.17
67.02 gal/hr.
mm. AUG. 67.17 GPH

CEM reading at 10.20 % O₂ 9.66
pHm CO 16.4

WLE sampled from tank #324
at 10.21 into 18 amber bottle
for #1 run.

Sampling conducted without gloves
Sample was taken by BOB Bishop JKH
CEM room. Slaves were rolled up. ~~at 10.2~~
CO at 10.25 was at 10.2
Label for bottle was brought
in at 10.29 by Donnie

15/31
C/K

Waste sample: only for ASH
 Name: Nurf of Sample,

They were not conducting a leak
 test between port changes.
~~Labels were not pre-addressed.~~
 conducting the Cam difference and
 over

Vac at 5 Hg. - 0. not moving
 pilot tubes held at .03 at 15 sec.
 both sides passed.

ORBIT regents 6/5/95

CO₂ 8.5

O₂ 19.0 with difference 10.5

Anal. Run #2

CO₂ 8.6 void 8.5
 O₂ 18.9 10.4

Anal Run #3

CO₂ 8.4
 O₂ 18.8 10.4

Run 2, Unit 1

Leak test ok. no movement

Run 2 started 12:30

1.26 Leak test

Leak test of line for

vac at 5

Plot to 0.50 for leak test

muscle probe exam - washed & brushed with acetone 3 times

Leak test #2, first result

CO₂ - 7.4

O₂ - 18.8

11.4

#3 ORSAT -

CO₂ - 7.4

O₂ - 18.8

11.4 O₂

#3 ORSAT

CO₂ - 7.4

O₂ - 18.9

11.5 O₂

The ORSAT and CEM don't appear to be in agreement

5-17-15

9.2 CO₂
18.4 O₂

9.2 O₂

Notes

- Use O₂ stat from Run #3 for mol wt
- Use CEMs O₂ to correct particulate
- Use H₂O's to correct
- Use O₂ stat from each Run for Mol wt; for correction

Should use worst case

The notes above were regarding a discussion which occurred between S. Scrimshaw and the facility and testers regarding the O₂ stat reading from Run #3 on unit 1; some of the reading on the first two runs were not as good as the O₂ stat or did not agree with the CEMs

page 6 of 26

Run 3 Run 3 started about 3:00 pm
filter #276
filter #270
filter out 300+

increased firing range
to 70.23 on the #3 gun.
The CO₂ at 25 to 31 ppm
looked test of train & pilot tubes
looked good train was at 5 Hz.

O₂ stat for Run 3, H₂O #1
Run 3, O₂ stat #1

18.2
9.3
8.9

CO₂ - 9.3%

8.9

O₂ - 18.2

Run 3, O₂ stat #2

CO₂ - 9.3%

9.0

O₂ - 18.3

Run 3, O₂ stat #3

CO₂ - 9.4

9.0

O₂ - 18.4

Page 7 of 26
11:02 Unit #3 tested today 8/1/95
8:00am Heating up the unit to increase
flow, Testing has not begun yet.

8:40 running traverse for velocity.
9:00 ~~AFM~~ AFM on #3

8:54 started the cleaning of the
probe, using acetone & brush.
Rinsed & brushed 3 times.
311a nozzle for the run
nozzle looked in good shape
not using grease unless necessary
initial leak check at 5kg
no movement

pilot leak check at 8 inch, 15 sec
good

Leak test the filites were dead
first = 3 ~~247~~ run but light
for second run.

Started at 9:15
Temp of probe & filites were at
2450 / 2416

5/9/95
8/1/95

Run #1 Unit #3

7:30

page 8 of 26

Start time: 9:17 AM

(9:20 by Tom watch) still 5 min.
between transverse

not getting read out for condenser
outlet 9:25 came back on in
few sec.

condenser replace

9:25

Blow out of ~~box~~ O.H unit
#3 flash back in boiler.
a lot of hot ash & black smoke
out boiler. Bob Bishop who
shut with burns. First degree.
~~Bob~~ Bob was taking sample
Safety never scheduled for
approximately 10:30

We are down, not possible
to change over

~~SD~~
~~8/11/95~~

X 107

9 of 24

10:30 AM 8/1/95

incident safety
boiler flash back

meeting regarding

The Unit #3, 9 30

a little smoke coming out stack.

they were sample. Came back

to fill sample, Vapor from

but may have cause flash back.

called 911

2nd degree burns, Jim Walsh,

called Morone, The response

team put them in hold.

Incident -

Team to investigate the

incident

Immediately before aggravated
boiler.

Fuel sample out of boiler

supply point. Close to boiler

should be farther upstream.

Combustion air to right next

to it less than 3 feet. Other

units have combustion air

in other places.

DX 195
8/1/95

JD
01/1/95

W.D.
8:00

100g 26

blackage into -

approve safety con-
naise blow in get?

on send loop take sample.
how are we taking sample will
be reviewed.

sampling location, PPE, procedures.
gives not used, sleeves rolled up

Sample point between #1 & 2
will be used

Started up Unit #3 ran
low fuel fuel than to high
fuel feed - looks good.
flow transverse was 8,400 acfm
Stack temp 660°
12:50 pm.

Sampling for run was take
at 1:20s and was sampled
by the H.W. Storage tank Koster
then by the boiler a

Sampling port was added to
the ~~stack~~ tank.

01/01 sample taken

1:31

Unit #3, Run #1 11 of 20

Sampler was wearing gloves
long-sleeve shirt & face shield.

Chain-of-Custody was filled
out.

Desat 2:30

Unit 3, first

CO₂ - 8.2

O₂ - 18.8

10.6

Unit 3, second desat

CO₂ - 8.2

O₂ - 18.6

10.4

Unit 3, 3rd desat

CO₂ - 8.2

O₂ - 18.7

10.5

SKD
8/1/95

Run 2, Unit 3 H.O. 1206 20

Pilot 0 at 6"

Pin 5" Hg. 001 Leak test OK

Start at 3:00 14:57 (2:57 PM) 4.03
001 Leak test of train
at 5 Hg.

Post. Leak test was having
trouble passing, but moved line
was OK. (pinched).

Leak test passed.

Pilot OK —

Orsat Unit #2

CO₂ 8.4

O₂ 18.6

10.2

Orsat 209

CO₂ 8.4

O₂ 18.5

10.1

Orsat #3

CO₂ 8.4

O₂ 18.6

10.2

8/1/55
JVD

Run 3, Unit 3 H.O.

O at 5 Hg - leak test

Run 3 started at 4:51 PM
Leak test train at 5:57 PM

at 5 Hg

9' in. pulser tube,

8 in. O.K.

ORSTT reading for Run 3
Run 3, Unit 3, ORSTT #1

CO₂ 8.6

O₂ 18.4

9.8

2

CO₂

8.6

9.8

O₂

18.4

CO₂

8.6

9.8

O₂

18.4

Page 12 of 26

8/2 Run 4, Unit 3

8:00

This run is being completed by cause the train following the blast had a lot of black smoke & particulates so it is being run as a back-up. However, the ~~blast~~ hot oil unit was not running well last night on start time was delayed. To approximately 10:00am.

We will be also completing 3 runs on one of the other units (2) 9:48 Transverse

needle same

~~20952 leak test~~

pilot test 8 inches O/C

5 kg was 0 leak test of train.

train started at 9:56

leak test at 10:55

at 6.17g, for 100 min.

was 0

pilot tube at 7 inches - 0

pilot tube testing at 8 - 001

Desat, Run 4, unit 3

CO₂ 8.1 10.5

O₂ 18.6

CO₂ 8.1 10.5

O₂ 18.6

CO₂ 8.0 10.5

O₂ 18.5

57D
2/2/55

Unit 2, Run #1 Page 16 of 26

Unit 2, started up at about 2:30 pm. Transverse was taken at 2:00 pm.

High-draw waste sampling was observed at 2:41 pm. Steve was taking sample. There was a problem getting the unit on-line. First production had to down the (coiling H₂S) and they could not get the unit stabilized.

Check 5" O

pilot - OK

Nozzle 0.376 for this start transverse is for 64 min.

This test is somewhat longer than the other two unit with

8 transverse rounds for each port total of 16 with 4 minutes per port for a total of 64 minutes.

pilot tube test for final test
uses O at 5.7 in. just
train test for final test
O at 5.7 in.

JH D
8/2/95

1

Present for final run

CO ₂	7	2	
02	18	23	11.6
CO ₂	7	2	
02	19	8	11.6
-CO ₂	7	2	
02	18	8	11.6

ISO for Run 1 was 105
ISO for Run 2 was 105

Run 2, 11.0 unit 2
Leak test 0 at 5" vac
pilot - OK

Run 2 started about 4:10

The WLF sample was taken at

4:35 by Steve

Final leak test for run #2
was at 5" vac and was 0

The pilot tube test was 0 at 9 1/2"

both. Approximately 10 grams of silica

8/19/95
JL

18 8 26

Run 3, Unit 2
method, oat 4" vac.
pilot

Offset for Run #2, Unit 2

CO ₂	7.6	11.2
O ₂	18.8	
CO ₂	7.6	
O ₂	18.8	11.2
CO ₂	7.5	
O ₂	18.7	11.2

Run #3 started approximately

6:05

Leak stop for 3 run o/c (final)

offset

CO ₂	7.8	10.8
O ₂	18.8	11
CO ₂	7.8	
O ₂	18.6	
CO ₂	7.8	10.9
	18.9	

Ended 7:10 pm

5775
8/2/5

Page 18.6
8/3 266

Boiler Run Boiler #1

Boiler Run is 72 minutes, 9 minutes
with 8 traverse points. Started
per traverse point. Started
taking flow traverses at a prearranged
9:10 AM. To get flow rate. ~~OK~~ OK

3,500 AC-FM

first leak "O" at 9 inches.

311 mag 3/6 sig. 9:45 AM

Test started at 9:40 AM

Leak at "O" at 5 in. in

Run went well not problems

Leak test for level of run "O" at

4 1/2 in. good

first tubes. 9:12 good for 15 sec

6 1/2 good for 15 sec

Filter was observed and blocked good

Observed recovery

OK

JP
8/3/95

SKF
8/3/95

Page 19 of
212

Records Reviewed
From Sampling Team

7/31/95 Velocity Traverse & Flow
Rate Unit #1, Run #2

Pulst No. 401

ΔP AOE .186 $\sqrt{.4302}$

Temp stack 720

ΔP .4236 ΔH 1.66

Stack temp ave 759

Gas Sample Vel = $V_m = 42.725$

Heater Box between 250 - 263 °F

probe temp 280 - 269 270 °F

Flue gas outlet 300 - 350 °F

Run #1

$\Delta P = .1245$ ΔH 1.68

Stack temp $V_m = 743$

$V_m = 42.1$

Heater Box - 250 - 261

probe temp 247 - 266

Flue outlet 300 - 350

Run #3 Unit 1#

$\Delta P = 4345$ $\Delta H = 1.71$

stack r = 271

$V_m = 41.926$ (480873)

Heater box 251 - 261

probe = 245 - 270

F.R. 200 - 329

Unit #2, Run 1 * Note first

run was noted

Unit #2, Run 1

$\Delta P = 4287$ stack temp 790

moist 906

$\Delta P = 5313$ $\Delta H = 2.53$

stack temp 805

$V_m = 56.437$ (= 780, 813)

Heater box 250 - 264

probe temp. 250 - 265

filter 350 - 394

JFD
8/3/95

8/13/97
 8/13/97

page 21
 8/26

Unit 2, Run # 2
 $\Delta P = 53.22 \Delta H = 2.52$
 Stack Temp Ave 802
 Gas Vol. 56.770 (84.2 800)
 Header Bur 250 - 265
 probe 250 264
 Sil ver 310 - 401

 Unit 2 Run # 3
 $\Delta P = 54.09 \Delta H = 2.54$
 Temp Stack - 829
 $U_m = 57.197 (91.7 870)$
 Header Bur 250 - 274
 probe 250 - 263
 Sil ver 310 - 411

 Unit # 3, Run # 1
 Velc. Transvers
 $\Delta P = 62.05, T_s = 70.1$
 mass 10.20
 $B.R. = 636.1 \Delta H = 1.85$ Stack Temp 690
 $U_m = 44.775 (560. 513)$
 Heat Bur 25 - 262
 probe dm 25 - 261
 Filter out 310 - 360

Unit #3, Run 2
 $\Delta P = 6577 \Delta H = 1.92$
 Stack temp ≈ 705
 $V_M = 45.062 (2610.543)$
 Header Box 251 - 269
 Probe 257 - 263
 Filter 310 - 350

Run 3, Unit #3
 $\Delta P = 6607 \Delta H = 1.92$ Stack temp 713
 gas Vol. $V_M = (4640)$ natural gas
 Header Box 250 - 263
 Probe 250 - 262
 Filter 310 - 365

Run 3, Unit 3
 $\Delta P = 6739 \Delta H = 1.99$
 temp Stack 719
 $V_M = 46.121 (2690.543)$
 Header Box 252 - 263
 Probe 250 - 261
 Filter 280 - 363

250
3/16/5
26

Page 23
8/3 of 24

Run 1: Boiler Unit (Unit 4)

OPSAF Units

CO ₂	13.0	
<u>O₂</u>	17.4	4.4
CO ₂	13.1	
<u>O₂</u>	17.4	4.3
CO ₂	13.0	
<u>O₂</u>	17.3	4.3

8/3/95
JLD

RUN 2, Boiler
Leak test 0 at 6" vac,
11:24 start - finish 12:41
pilot tube - ok
train test success, "O"

Overstat	
CO ₂	13.1
	4.2
O ₂	17.3
CO ₂	13.1
O ₂	17.3
CO ₂	13.1
O ₂	17.3
	4.2

page 25J
26

WLE - feed rate for 8/13/95
last run before 71-72 gph

H₂O
WLE - unit 8/2/93 99-100 gph
and 4 min unit 3

8/1/95 WLE - H₂O unit 3 101 gph
8/2/94 (Arum) 100-101 gph

7/31/95 WLE H₂O unit #1
~~67~~ 63.96 - 69.87

8/3/95

Boulder Run #3

1:12 start time

Junk check time from 0 at 7th vac.

Waste feed what sampled at approx

11:35 pm by Don

Unit 4, Run #1 $\Delta P = 5642 \quad \Delta H = 1.68$

Stack tank 523

V_m 84.48.540 (935 ft³)

Heeler box 250-263

Pake 250-263

Silke 260-325

Unit 4, Run #2 $\Delta P = 5680 \quad \Delta H = 1.70$ V_m = 50.439 (970 ft³ approx)

Heeler box 250-263

Pake 250-264

Silke 333-358

Jined tank stat on Boulder

Wires at 5 was 1005.

pilot 6" 8K 15 sec

pilot 5-7" 2K 15 sec

November 28, 1995

Correspondence Containing Facility Information for Site Visit

Kearney/Centaur Division
A.T. Kearney, Inc.
215 North Presidential Boulevard
Bala Cynwyd, Pennsylvania 19004
610 617 8980
Facsimile 610 617 8999

Management
Consultants

RZ1-R03002.14-FD-001

November 28, 1995

ATKEARNEY

Ms. Donna Saunders
Regional Project Officer
U.S. Environmental Protection Agency
Region III (3HW-61)
841 Chestnut Street
Philadelphia, PA 19107

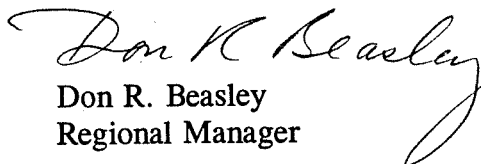
Reference: EPA Contract No. 68-W4-0013; EPA Work Assignment No.
R03002.14; BIF Sampling and Analysis Technical Assistance;
Velsicol Chemical Corporation; BIF Historical Operating Data
Request

Dear Ms. Saunders:

Enclosed, please find the facility-specific information which EPA and A.T. Kearney will be requesting during the scheduled inspection of this facility. The dates selected were discussed with and approved by Mr. Luis Pizarro, the EPA Work Assignment Manager.

Please feel free to contact the A.T. Kearney Work Assignment Manager, Ms. Cathy Dare, at 610/617-8990, or me if you have any questions.

Sincerely,


Don R. Beasley
Regional Manager

cc: L. Pizarro, EWAM
W. Jordan/Central Files
C. Dare, ATK WAM
J. Dreith, ATK

Kearney/Centaur Division
A.T. Kearney, Inc.
215 North Presidential Boulevard
Bala Cynwyd, Pennsylvania 19004
610 617 8980
Facsimile 610 617 8999

Management
Consultants

November 28, 1995

ATKEARNEY

Velsicol Chemical Corporation
P.O. Box 120
Route 297
Chestertown, MD 21620

Dear Owner/Operator:

In order to complete this BIF inspection in a timely fashion, we are requesting that specific operating data for selected dates be retrieved from the operating records and provided to the BIF inspectors, prior to their departure from the facility, or by an agreed-upon date.

The selected dates are as follows:

- October 26, 1994;
- December 25, 1994;
- February 14, 1995;
- March 18-19, 1995 (weekend). Alternatively, if the facility was not operating on this weekend, provide information for March 11-12, 1995;
- May 22, 1995;
- July 7, 1995; and
- The date of this inspection.

For the above dates, provide information regarding when the unit experienced an automatic waste feed cut-off, an operating problem, or an exceedance of the compliance limits.

This information must be provided for all regulated units that were operational on the dates listed above. If the unit(s) were not burning hazardous waste on any of the requested dates, then an alternate date, closest to the requested date, must be

April 8, 1996

Correspondence Rejecting Recertification of Compliance

Kearney/Centaur Division
A.T. Kearney, Inc.
215 North Presidential Boulevard
Bala Cynwyd, Pennsylvania 19004
610 617 8980
Facsimile 610 617 8999

Management
Consultants

RZ1-R03024.01-FD-076

April 8, 1996

ATKEARNEY

Ms. Donna Saunders
Regional Project Officer
U.S. Environmental Protection Agency
Region III, 3HW-70
841 Chestnut Street
Philadelphia, PA 19107

Reference: EPA Contract No. 68-W4-0013; EPA Work Assignment No. R03024;
BIF Certification of Compliance Reviews for Multiple Facilities; Review
for Velsicol Chemical Corporation, Chestertown Plant; Task 16
Deliverable

Dear Ms. Saunders:

A.T. Kearney has reviewed the Recertification of Compliance documentation provided to determine whether the Velsicol Chemical Corporation, Chestertown Plant, has properly calculated the allowable emission rates and feed rates based on their test data, and has conducted the Compliance Certification test in accordance with the methodologies prescribed in the BIF rule and the EPA guidance. A.T. Kearney has also reviewed the provided documentation to determine the adequacy of the Quality Assurance/Quality Control (QA/QC) procedures. The specific data gaps for each analysis are discussed below and outlined in the attached draft Notice of Deficiency (NOD) comments.

The review of the allowable emission rates and feed rates involved a review of the procedures used, a comparison with the prescribed procedures and a spot-check of the calculations, in which an independent check of the calculations for one run was made from the basic data contained in the report, along with the supporting documentation provided by the facility. Checks of the calculated values for the emission and feed rates for the metals and HCl/Cl₂ were consistent with the reported results. A calculation check of the particulate concentration, including the isokinetic variation, was performed. The stack test results for particulates were checked using spreadsheet calculations. The results obtained were consistent with the reported results. The spreadsheet calculations used for comparison are provided in Appendix A to this deliverable.

Ms. Donna Saunders
April 8, 1996

According to the submittal, none of the four combustion units located at the Velsicol facility are equipped with soot-blowing capabilities and no short periods of increased emissions, other than peak operation, have been identified by the facility. Therefore, maximum emissions are expected to occur at maximum waste firing rates.

The review of the operating conditions specified by the facility included a review of the submitted compliance forms, including all submitted raw data and Continuous Emission Monitoring System (CEMS) data. The review demonstrated that the operating conditions were properly calculated, based on the test operating conditions reported and EPA guidance.

During compliance testing of Velsicol Unit No. 1, a leak was discovered in the peristaltic pump after run number 2. This leak was repaired prior to the start of the third run. In discussions with DEA and EPA representatives (Mike Dixon and Susan Sciaratta) it was agreed that the Orsat analysis for run number 3 would be used to determine the molecular weight for all three runs. Furthermore, it was agreed that average oxygen concentration measured by the Velsicol CEM system would be used to correct the grain loading to 7% O₂.

The facility has also failed to provide the required statement documenting that procedures prescribed in the QA/QC plan submitted with the compliance test notification have been followed. In addition, the facility has also failed to provide allowable emission rates for metals and chlorine on forms CC-3. A specific comment has been drafted and has been included in Attachment 2 to address these concerns.

Two BIF metals (selenium and nickel) were not addressed in the compliance test. These metals were not regulated at the time of the initial CoC test and therefore would not have been expected to be included in the recertification submittal. However, EPA Region III will need to include a suitable comment if these metals are to be included in future tests.

The submittal did not provide sufficient information on sampling and QA/QC procedures. Specifically, the facility has failed to provide a discussion on the collection of QA/QC and split samples or the analytical methods used for all parameters. Specific NOD comments have been drafted to address these issues. EPA may wish to modify these NOD comments.

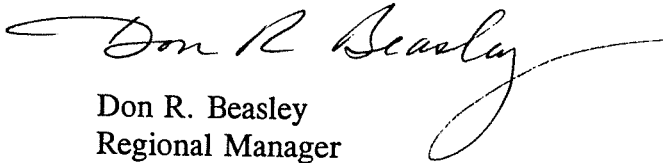
A site-specific dispersion modeling evaluation was previously conducted in 1992 to predict the maximum off-site impact due to facility emissions. No changes to that modeling were made since the last revision to the Certification of Compliance. Therefore, this same data was used in preparing the Recertification of Compliance submittal.

Ms. Donna Saunders
April 8, 1996

Finally, the submittal is filled with numerous discrepancies with respect to data found in the field data sheets in Attachment 3, Appendix C, Tables 4-1 through 4-4, and the CoC forms. The submittal must be carefully reviewed to ensure that data has been properly entered on all forms and tables and that all calculations have used the correct data.

Please contact me or the A.T. Kearney Work Assignment Manager, Bert OConnell, at (703) 739-4742, if you have any questions.

Sincerely,



Don R. Beasley
Regional Manager

cc: S. Sciarratta, EPA Region III
W. Jordan/Central Files
W. OConnell, A.T. Kearney WAM
J. Schliesmann-Merkle, A.T. Kearney

**BOILERS AND INDUSTRIAL FURNACE
RECERTIFICATION OF COMPLIANCE REVIEW
NOTICE OF DEFICIENCY (NOD)
VELSICOL CHEMICAL CORPORATION
CHESTERTOWN, MARYLAND
EPA I.D. NO. MDD001890060**

Submitted to:

**Ms. Donna Saunders
Regional Project Officer
U.S. Environmental Protection Agency
Region III
841 Chestnut St.
Philadelphia, PA 19107**

Submitted by:

**A.T. Kearney, Inc.
215 North Presidential Boulevard
Bala Cynwyd, PA 19004**

EPA Work Assignment No.	:R03024
Contract No.	:68-W4-0013
A.T. Kearney WAM	: W. OConnell
Telephone No.	: 703/739-4742
EPA WAM	: S. Sciaratta
Telephone No.	: 215/597-0229

April 8, 1996

**BOILERS AND INDUSTRIAL FURNACE (BIF)
RECERTIFICATION OF COMPLIANCE
NOTICE OF DEFICIENCY (NOD)
VELSICOL CHEMICAL CORPORATION
CHESTERTOWN, MARYLAND
EPA I.D. NO. MDD001890060**

Adequacy of Compliance Test and QA/QC Results

1. Provide a more detailed discussion of all QA/QC procedures and sampling results. To properly verify all the reported results, the laboratory must indicate the analytical method used for all parameters and provide all the QA/QC information for all of the analyses. In addition, provide all of the laboratory bench sheets to ensure proper preparation and analysis of samples.
2. According to the submittal the facility used a reference air concentration (RAC) of $0.3 \mu\text{g}/\text{m}^3$ for thallium. The value currently used by EPA is $0.5 \mu\text{g}/\text{m}^3$ (40 CFR 266 Appendix IV). This error is in the conservative direction but the submittal should be revised to use the correct RAC, as well as the appropriate Tier IA feed rate limit.

Attachment 2 - Data Needed to Complete the File/Record:

1. The Certification of Compliance forms should include a statement ensuring that procedures prescribed in the QA/QC plan submitted with the compliance test notification have been followed. In addition, revise forms CC-3 to include the allowable emission rates for all metals and chlorine.

2 appor-tioned

CO was not reported either

2. Table 4-3 indicates that the stack diameter for Combustion Unit #3 is 27.5 inches. However, both the field data sheets and page 9 of the submittal indicate that the stack diameter of the above referenced unit is 23 inches. Revise the submittal to correct this discrepancy.

3. Revise the Recertification Report to provide additional information on sampling procedures. Provide all of the field logbook sheets, including collection of QA/QC and split samples. Provide a discussion of all sampling QA procedures, and pretest QC checks that were conducted in the field and in the laboratory on each instrument.

4. Revise the CoC Report to demonstrate that the filters were inspected for damage prior to testing and that pitot tubes were examined after field use.

*OK
raw
calc's used
23" stack d.*

*were
calc's correct?*

air modeling probs.

$$A = \frac{\pi d^2}{4}$$

$$\begin{aligned} 23'' &= 1.92 \text{ ft} \\ A &= 2.89 \text{ ft}^2 \\ 27.5'' &= 2.29 \text{ ft} \\ A &= 1.8 \text{ ft}^2 \end{aligned}$$

APPENDIX A

METHOD 5 DRY GAS VOLUME

revised 10/4/95 hms

Velsicol Chemical
Boiler #3, Run #3

40 CFR 60, Appendix A, Method 5, Pgh. 6.3

Equation 5-1

Input:

Volume measured by meter	$V_m =$	45.06 ft ³
Meter calibration factor	$Y =$	1.002
Average dry gas meter temperature	$T_m =$	105 °F
Barometric pressure	$P_{bar} =$	30.19 in. Hg
Average orifice differential	$\Delta H =$	1.92 in. H ₂ O

Standard conditions:

Atmospheric pressure	$P_{std} =$	29.92 in. Hg
Standard temperature	$T_{std} =$	528 °R
Units conversion factor	$K_1 =$	17.64 °R/in. Hg

$$V_m(std) = K_1 * V_m * Y * ((P_{bar} + (\Delta H/13.6))/T_m)$$

$$V_m(std) = 42.7561 \text{ cu ft dry std}$$

Facility reports 42.78 cu ft dry std

VOLUME OF WATER VAPOR and MOISTURE

Equation 5-2 and 5-3

Input:

Volume of liquid collected	$V_{lc} =$	80 ml
Units conversion factor	$K_2 =$	0.04707 ft ³ /ml
Water vapor pressure at stack temp	$W_{vp} =$	100 in Hg

$$V_w(std) = K_2 * V_{lc}$$

$$V_w(std) = 3.7656 \text{ ft}^3$$

$$B_{ws} = V_w(std)/(V_m(std) + V_w(std))$$

$$B_{ws} = 0.08094$$

$$B_{used} = 0.0809428$$

$$B_{sat} = 3.33444$$

Facility reports .08

NOTE: For saturated gas streams, calculate another moisture concentration assuming saturated conditions. Use a psychrometric chart or steam table to obtain saturation moistures at the average stack temperature. Use the lowest of the two values.

PARTICULATE CONCENTRATION

Equation 5-4, 5-5, 5-6

Input:

Mass of acetone residue $M_a = 0.4 \text{ mg}$
 Volume of acetone blank $V_a = 50 \text{ ml}$
 Density of acetone $p_a = 0.79 \text{ g/ml}$
 Volume of acetone used in wash $V_{aw} = 200 \text{ ml}$
 Total particulate collected (filter + probe wash residue) $M_n = 103.6 \text{ mg}$

	mg
filter	85
Probe wash	18.6
total	103.6

Acetone blank concentration

$$C_a = M_a / (V_a * p_a * 1000)$$

$$C_a = 1.01E-05 \text{ mg/mg}$$

Acetone wash blank

$$W_a = C_a * V_{aw} * p_a * 1000$$

$$W_a = 1.6 \text{ mg}$$

Particulate concentration

Equation 5-6

$$C_s = 0.001 * (M_n - W_a) / V_m(\text{std})$$

$$C_s = 2.39E-03 \text{ g/ft}^3 \quad 3.68E-02 \text{ gr/ft}^3 \quad 4.77E-02 \text{ gr/dscf @ 7\% O}_2 \quad \text{Facility reports } 4.84E-02$$

METHOD 3 DRY MOLECULAR WEIGHT

40 CFR 60, Appendix A, Method 3, pgh. 7

Inputs:

Concentration of CO₂ 8.4 %
 Concentration of O₂ 10.2 %

$$\text{Dry Molecular weight} = .44 * \text{CO}_2 + .32 * \text{O}_2 + .28 * \text{CO} + \text{N}_2$$

$$M_d = 29.752 \text{ lb/lb mole}$$

$$\text{Wet molecular weight} = 18 * B_w + M_d * (1 - B_w)$$

$$M_w = 28.8008 \text{ lb/lb mole}$$

METHOD 2 STACK GAS FLOW RATE

40 CFR 60, Appendix A, Method 2, pgh. 5

Average stack gas velocity

Equation 2-9

Inputs:

Average of square roots of pitot tube reading $d_{rt p} = 0.65907$ in. H_2O
 Average stack temperature $T_s = 704.5$ °F
 Absolute stack pressure $P_s = 29.99$ in. Hg
 Molecular weight of stack gases, wet $M_w = 28.8008$ lb/lb mole
 absolute stk pressure = Barom press + stk pres

Standards:

Pitot tube coefficient $C_p = 0.84$
 Pitot tube constant $K_p = 85.49$

$$V_s = K_p * C_p * d_{rt p} * (T_s/P_s * M_s)^{0.5}$$

$$V_s = 54.9549 \text{ ft/sec}$$

$$3297.29 \text{ ft/min}$$

Average stack gas dry flow rate

Equation 2-10

Facility reports 3281 ft/min

Input:

Stack diameter 23 inches $A = 2.8852542 \text{ ft}^2$

$$Q_{std} = 3600 (1 - B_{ws}) * A * V_s * T_{std} * P_s / (T_s(\text{avg}) * P_{std})$$

$$Q_{std} = 238,421 \text{ dscf/hr}$$

$$3,974 \text{ dscfm}$$

Facility reports 3977 dscfm

Particulate emissions

$$E = C_s * Q_{std}$$

$$E = 568.783 \text{ g/hr}$$

$$1.25283 \text{ lb/hr}$$

$$0.158 \text{ g/sec}$$

Facility reports 1.27 lb/hr

Isokinetic variation

Equation 5-8

Input:

Constant $K_s = 0.0945$
 Total sampling time $t_h = 60$ min
 Diameter of sampling nozzle $D_n = 0.31$ inches $A_n = 5E-04 \text{ ft}^2$

$$I = K_s * T_s * V_m(\text{std}) / (P_s * V_s * A_n * t_h * (1 - B_{ws}))$$

$$I = 98.1395$$

$$90\% < I < 110\%$$

Facility reports 98.1%

pitot rd	sq rt	Temp	trav pt
0.49	0.7	722	1
0.49	0.7	719	2
0.42	0.648	695	3
0.39	0.624	692	4
0.39	0.624	683	5
0.36	0.6	702	6
0.48	0.693	714	7
0.48	0.693	711	8
0.42	0.648	713	9
0.52	0.721	704	10
0.4	0.632	692	11
0.39	0.624	707	12
0	0	0	13
0	0	0	14
0	0	0	15
0	0	0	16
0	0	0	17
0	0	0	18
0	0	0	18
0	0	0	20
0	0	0	21
0	0	0	22
0	0	0	23
0	0	0	24
	0.659	704.5	

BIF CALCULATION VARIABLES

Variable	Symbol		Units
Volume Measured by Meter	V_m	45.06	ft ³
Meter Calibration Factor	Y	1.002	
Average Dry Gas Meter Temperature	T_m	105	°F
Barometric Pressure	P _{bar}	30.19	inHg
Average Orifice Differential	delta H	1.92	inH ₂ O
Volume of Liquid Collected	V_{lc}	80	ml
Water Vapor Pressure at Stack Temp	W_{vp}	100	inHg
Mass of Acetone Blank Residue	M_a	0.4	mg
Volume of Acetone Blank	V_a	50	ml
Volume of Acetone Used in Wash	V_{aw}	200	ml
Concentration of CO ₂		8.4	%
Concentration of O ₂		10.2	%
Absolute Stack Pressure	P_s	29.99	inHg
Stack Diameter	D	23	in
Total Sampling Time	th	60	min
Diameter of Sampling Nozzle	D_n	0.311	in

Velsicol

- RAC for Beryllium = $0.0042 \mu\text{g}/\text{m}^3$

$$\frac{0.0042 \mu\text{g}/\text{m}^3}{0.79 (\mu\text{g}/\text{m}^3)(\text{g}/\text{s})} = 0.0053 \text{ g/s} \times 3600 \text{ s/hr} = 19.139 \text{ g/hr}$$

Agrees with Table 3-2 ; Table 6-3

- RAC for Cadmium = $0.0056 \mu\text{g}/\text{m}^3$

$$\frac{0.0056 \mu\text{g}/\text{m}^3}{0.79 (\mu\text{g}/\text{m}^3)(\text{g}/\text{s})} = 0.00708 \text{ g/s} \times 3600 \text{ sec/hr} = 25.518 \text{ g/hr}$$

Agrees with Table 3-2 ; Table 6-3

- RAC for Chromium = 0.00083

$$\frac{0.00083 \mu\text{g}/\text{m}^3}{0.79 (\mu\text{g}/\text{m}^3)(\text{g}/\text{s})} = 0.00105 \text{ g/s} \times 3600 \text{ sec/hr} = 3.78 \text{ g/hr}$$

Agrees with Table 3-2 ; Table 6-3

- RAC for Lead = $0.09 \mu\text{g}/\text{m}^3$

$$\frac{0.09 \mu\text{g}/\text{m}^3}{0.79 (\mu\text{g}/\text{m}^3)(\text{g}/\text{s})} = 0.11392 \text{ g/s} \times 3600 \text{ sec/hr} = 410.126 \text{ g/hr}$$

Agrees with Table 3-2 ; Table 6-3

- RAC for Mercury = $0.3 \mu\text{g}/\text{m}^3$ - Facility has used $0.08 \mu\text{g}/\text{m}^3$

$$\frac{0.08 \mu\text{g}/\text{m}^3}{0.79 (\mu\text{g}/\text{m}^3)(\text{g}/\text{s})} = 0.10126 \text{ g/s} \times 3600 \text{ s/hr} = 364.556 \text{ g/hr}$$

Agrees with Table 3-2 ; Table 6-3

$$1367.08 \text{ g/hr}$$

Allowable Emission Rates

Nelsical

Adjusted Tier I

dispersion factor of $0.79 (\mu\text{g}/\text{m}^3)(\text{g}/\text{s})$ per modeling

- RAC for Cl $.04 \mu\text{g}/\text{m}^3$

$$\frac{.04 \mu\text{g}/\text{m}^3}{0.79 (\mu\text{g}/\text{m}^3)(\text{g}/\text{s})} = .05 \text{ g/s} \times 3600 \text{ s/hr} = 182.27 \text{ g/hr}$$

Table 3-2 states 1822.78 g/hr
Table 6-3

- RAC for Antimony $.03 \mu\text{g}/\text{m}^3$

$$\frac{.03 \mu\text{g}/\text{m}^3}{0.79 (\mu\text{g}/\text{m}^3)(\text{g}/\text{s})} = .0379 \frac{\text{g/s}}{\mu\text{g}} \times 3600 \text{ s/hr} = 136.70 \text{ g/hr}$$

Table 3-2 states 1367.09 g/hr
Table 6-3 states 1367 g/hr

RAC for Arsenic = $.0023 \mu\text{g}/\text{m}^3$

$$\frac{.0023 (\mu\text{g}/\text{m}^3)}{0.79 (\mu\text{g}/\text{m}^3)(\text{g}/\text{s})} = .0029 \text{ g/s} \times 3600 \text{ s/hr} = 10.48 \text{ g/hr}$$

Agrees with Table 3-2 ; Table 6-3.

RAC for Barium = $50 \mu\text{g}/\text{m}^3$

$$\frac{50 \mu\text{g}/\text{m}^3}{.79 (\mu\text{g}/\text{m}^3)(\text{g}/\text{s})} = 63.29 \text{ g/s} \times 3600 \text{ s/hr} = 227848.1 \text{ g/hr}$$

Velsicol

• Silver RAC = $3 \mu\text{g}/\text{m}^3$

$$\frac{3 \mu\text{g}/\text{m}^3}{.79 (\mu\text{g}/\text{m}^3)(\text{g}/\text{s})} = 3.797 \text{ g/s} \times 3600 \text{ sec/hr} = 13670.88 \text{ g/hr}$$

Agrees with Table 3-2 ; Table 6-3

• RAC for Thallium = $0.3 \mu\text{g}/\text{m}^3$

$$\frac{0.3 \mu\text{g}/\text{m}^3}{.79 (\mu\text{g}/\text{m}^3)(\text{g}/\text{s})} = .37974 \text{ g/s} \times 3600 \text{ s/hr} = 1367.088 \text{ g/hr}$$

Agrees with Table 3-2 ; Table 6-3

Regulations state RAC for Thallium = $0.5 \mu\text{g}/\text{m}^3$

$$\frac{0.5 \mu\text{g}/\text{m}^3}{.79 (\mu\text{g}/\text{m}^3)(\text{g}/\text{s})} = .63291 \text{ g/s} \times 3600 = 2278.48 \text{ g/hr}$$

Ratios for carcinogenic metals agree with Table 3-2.

August 28, 1996

Correspondence Containing Site Visit Notes



MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway • Baltimore Maryland 21224
(410) 631-3230

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

TO: Velsicol Chemical Corporation File - Premise Number 14-0001

FROM: Suna Yi *[Signature]*
Public Health Engineer
Air Quality Permits Program
Air and Radiation Management Administration

DATE: August 28, 1996

SUBJECT: Site Visit Notes and Change of Ownership Registrations

Velsicol Chemical Corporation is located at 10380 Worton Road, Chestertown, MD 21620. This facility was formerly owned by Huls America and was obtained by Velsicol in January 1995. The facility manufactures synthetic lubricants and plasticizers. The facility consists of an esterification/synthetic lubricant plant, a viscoplex plant, a primary and secondary wastewater treatment system, a multi-boiler/heater power facility, and a tank farm. The company employs 76 people and operates in 12 hour shifts, 4 shifts per day, 7 days a week, 365 days a year.

A site visit to Velsicol Chemical Corporation was conducted on August 28, 1996 to discuss change of ownership registrations and current permit to construct application status issues. A tour of the facility was also conducted. Jack Giblin, Environment, Health, and Safety Manager for Velsicol Chemical Corporation and the following representatives from the Maryland Department of the Environment were present: Suna Yi, Marcellina Gurley, and Jay Bozman.

The site visit was conducted in order to update all Velsicol files at the Maryland Department of the Environment from Huls America to Velsicol Chemical Corporation. Many of the Huls America equipment and process registration numbers as well as other previous owners have been consolidated into fewer numbers. A total of five (5) numbers will be assigned to the facility based on major groupings of equipment determined at the site visit.

"Protecting Maryland's Land, Air and Water Resources"

These groupings are as follows:

- (1) **Ester and Synthetic Lubricant Plant:** This plant consists of an esterification process and a synthetic lubricant process. There are three main synthetic lubricant reactors and four charging vessels. Each reactor has its own vent condenser. The Huls America registration number 14-7-0008 was reassigned for this plant to a new Velsicol number 14-7-0018 in May 1995 in order to issue a permit for three new vent condensers to the plant (14-7-0018 M). The Company will be submitting AMA-5 forms for each process in the plant in order to complete the change of ownership registration.
- (2) **Viscoplex Plant:** This plant is free-standing and completely separate from the ester/syn. lubricant plant. It houses one reactor with scrubber and several raw material and product storage tanks. An AMA-5 has been submitted to re-register the plant but has not yet been issued a current Velsicol number. The corresponding Huls America number 14-7-0016 will be deleted and replaced with this new number.
- (3) **Tank Farm:** This tank farm contains many large storage tanks for esterification/synthetic lubricant plant by-products and other related materials. The old Huls America number 14-9-0002 needs to be changed to a current Velsicol number. The company will submit an AMA-5 form to complete the registration. A recent permit to construct was issued for two carbon canisters under numbers 14-7-0003 M and 14-7-0007 M. These are old, incorrect numbers and need to be changed to the new tank farm number when it is assigned.
- (4) **Boiler Room:** This room contains three hot oil liquid tube heaters and two boilers. One boiler uses #6 oil and the other heaters and boiler use both #6 oil and waste light ends. The two boilers are registered under Huls America numbers 14-4-0070 and 14-4-0071. The three liquid tube heaters are registered under Nuodex (another former owner) numbers 14-7-0010, 14-7-0011, and 14-7-0012. All of these heaters/boilers will be issued one Velsicol number for a boiler room. The company will submit the appropriate AMA-11 forms.
- (5) **Waste Water Treatment Plant:** This plant consists of primary and secondary treatment systems. The company has submitted a permit to construct two new tanks for this plant. There are no corresponding numbers for this plant for previous owners so a new Velsicol number will be issued for the plant. The company will submit AMA-5 forms for the treatment systems but requests that the two new tanks be assigned the new plant number first in order to start construction before the end of September 1996.

All other registration numbers (Huls America and all other previous owners) not specified as of these five groupings shall be deleted from the files for Velsicol Chemical Corporation (Premise Number 14-0001).

cc: Mr. Jack Giblin
Mr. Jay Bozman
Ms. Marcellina Gurley
Ms. Judy Nozarinko

STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION MANAGEMENT ADMINISTRATION

INSPECTION AND OBSERVATION / AFS POINT ACTION

Kent COUNTY Genovique Specialties Corporation 24-029-0001
FACILITY NAME

ADDRESS 10380 Worton Rd., Chestertown, MD 21620

DATE OF INSPECTION YY MM DD ARRIVAL TIME AM ☐ PM ☐ POINT ID
1 0 0 1 2 7 DEPARTURE TIME AM ☐ PM ☐
ANNOUNCED ☐ UNANNOUNCED ☐ INSPECTOR NAME Gregory J. Franzoni, Sr. STAFF ID
Y 7 3

ACTION TYPE

F S

FS FULL COMPLIANCE EVALUATION ON-SITE FX FULL COMPLIANCE EVALUATION OFF-SITE
PS PARTIAL COMPLIANCE EVALUATION ON-SITE PX PARTIAL COMPLIANCE EVALUATION OFF-SITE
GI GENERAL INSPECTION CS MEETING ONLY
OB OBSERVATION 18 OBSERVE STACK TEST
79 COMPLAINT INSPECTION 82 STAGE II INSPECTION

RESULT CODE

9 5

15 DUST 16 ODORS 28 MISC. SAMPLE TAKEN
41 NOT OPERATING 48 GATHER INFORMATION 67 AMA-19(VISIBLE EMISSIONS) ISSUED
68 AMA-20 (NOV) ISSUED 83 FOLLOW-UP ACTION 90 PERMANENT SHUTDOWN
92 OPEN BURNING 94 VISIBLE EMISSIONS 95 NO VIOLATIONS

AIR PROGRAM

0 0 0 0 0 9

FACILITY CONTACT

Joanne Syzmanski, Manager EH & S

NAME

1-410-778-1991 Ext 252

TELEPHONE NO.

TEMPERATURE 40 Deg F

☐ HOT ☒ COLD
☐ MODERATE

WEATHER

☒ CLEAR ☐ OVERCAST
☐ RAIN/SNOW ☐ PARTLY CLOUDY

WIND DIRECTION NW

N
W + E
S

WIND SPEED 8-10 MPH

☐ CALM ☐ MODERATE
☒ LIGHT ☐ STRONG

DISCUSSION: I performed a Full Compliance Evaluation of Genovique Specialties Corporation (formerly Velsicol Corporation) on 1/27/10.
There were no visible emissions observed from any stack or building opening at the facility. I performed a Method 9 Observation of Boiler No. 2, a 29.3 MBH unit burning No. 6 fuel oil. Plume opacity averaged 0% for a 12-minute period. There were no odors detected downwind of the property line. 12-month rolling average NOx, SOx, single HAP and combined HAPS were all far below major source thresholds. For further details, please see the attached inspection report. The facility complies with all requirements of State Permit to Operate No. 029-00001.

G. J. Franzoni, Sr. 1/28/10
Inspector Signature Date

Joanne Syzmanski 01/29/10
Supervisor Signature Date

AFS COMMENT:

ATTACHED SPECIFIC INSPECTION FORMS

Genovique Specialties Corporation

10380 Worton Road
Chestertown MD 21620
Phone: (410) 778-1991 ext 252
FAX: (410) 778-5538
Date of last inspection: 2/27/07

029-00001

Contact: Ms. Joanne Syzmanski,
Mgr. Environmental, Health & Safety
P/O Expiration: 12/31/14
Assigned to: G. J. Franzoni, Sr.

Inspection Findings

I performed a Full Compliance Evaluation of Genovique Specialties Corporation located in Kent County at 10380 Worton Road, Chestertown, Maryland on 1/27/10. The inspection was performed using a checklist that includes all the requirements found in the facility's permits to construct and State Permit to Operate No. 029-00001. There were no visible emissions observed from any stack or building opening at the facility. I performed a Method 9 Observation on the exhaust stack of Boiler No. 2, (4-0075) a 29.3 MBH boiler firing No. 6 fuel oil. Plume opacity averaged 0% for a 12-minute period. The facility has not burned No. 2 fuel oil or waste oil since the last inspection.

During the inspection, R-121 was undergoing a cleaning cycle; R-127 was processing a batch of B-988, a benzoate; and, R-132 was processing a batch of V-368, a polymeric. The Regenerative Thermal Oxidizer (RTO) was operating routinely with combustion zone temperatures ranging from 1600 to 1819°F. I reviewed facility records for RTO on-stream time since the last inspection and determined that the average on-stream time for the unit was 93%. The monthly on-stream percentage for 2009 was 95% which exceeds the permit standard of 90% minimum. Production rate at the facility during 2009 was approximately 16% less than 2008. RTO operation was consistent during 2009. The facility replaced all RTO combustion zone thermocouples in December of 2009 in accordance with its preventive maintenance program.

I reviewed the facility's 12-month rolling average charts for SOx, NOx, single HAP, and combined HAPS since the last inspection. All values were below major source thresholds. The facility complies with all terms and conditions of Permit to Operate No. 029-00001.

Company Description

Genovique Specialties Corporation manufactures monomeric and polymeric plasticizers in three independently operated reactors. The facility also has a pre-charge vessel, two product filtering vessels and a flaking process. Raw materials include alcohols, dry acids, molten acids, peroxides, and caustic soda. A Regenerative Thermal Oxidizer (RTO) controls all process vessel vents during normal operation. A water scrubber controls exhaust gases when the RTO is off line.

Process wastewater is treated in an on-site wastewater treatment plant prior to discharge. The facility has a large tank farm with approximately 139 tanks, ranging in size from 2,500 gallons to 300,000 gallons.

Inspection Checklist**General Issues**

1. Conduct pre-inspection file review and list information necessary for compliance demonstrations with all applicable requirements.
I reviewed the facility file to check for compliance schedules, construction and/or operating permits conditions, malfunctions and general information.
2. Conduct a pre-inspection meeting with the representative(s) of the facility who will accompany you during your inspection and records review.
The purpose of the inspection, the processes to be inspected and the records to be reviewed were discussed with Ms. Joanne Syzmanski of Genovique Specialties Corporation on 1/27/10.
3. Observe all air exhaust points throughout the facility for visible emissions. If any visible emissions are observed, conduct a Reference Method 9 visible emissions evaluation, identify the source of the visible emissions, and determine whether the visible emissions are a violation of COMAR.
There were no visible emissions observed from any stack or building opening at the facility.
4. If no visible emissions are observed, conduct a formal Method 9 visible emissions evaluation on at the facility for at least 12 minutes. Attach to the final inspection report the ARMA-19 form on which the formal observation is recorded.
A Reference Method 9 Observation was performed on the exhaust gas from Boiler No. 2 (4-0075). Plume opacity averaged 0% for a 12-minute interval. (Attachment 1)
5. Conduct an odor survey, if necessary, down wind of the plant. If any odors from the plant that could interfere with the reasonable enjoyment of any non-Company property are detected, try to determine the source(s) of the odors.
An odor survey was conducted down wind of the property line and no odors were detected beyond the property line.
6. Determine whether the facility is subject to NO_x RACT requirements. Attach specific forms completed for process fuel burning units that are rated at 100 MMBTU/hr or less heat input and for all space heaters.
The facility is not a major source of NO_x. Therefore, NO_x RACT does not apply.
7. Review records as necessary to audit the Company's most recent certified emissions statement and air toxics compliance certification.
I reviewed the Company's 2008 Certified Emissions Statement. A mathematical model developed by EA Engineering is used to calculate VOC emissions from the facility's chemical reaction processes. The model calculates the theoretical VOC emissions for each product manufactured at the facility. The only required input for the model is the number of batches of each product that was manufactured during the previous year. I examined batch records for 2008 and compared

the records with the figures included in the support documentation for the facility's Certified Emissions Statement. In each case, the figures compared favorably. VOC emissions from storage tanks are calculated using EPA's TANKS 4 software program, and VOC emissions from the facility's wastewater treatment plant are calculated using EPA WATER 9 and TANKS 4 software.

Emissions from fuel combustion are determined via AP-42 emissions factors. I compared the 2008 record of fuel consumption for each of the facility's fuel burning units with the fuel consumption figures included in the support documentation for the facility's emissions statement. The figures compared favorably. There have been no changes in the methodology used to calculate VOC emissions.

8. For each of the facility's registrations, determine if the equipment associated with the registration is operating at the time of the inspection. If the equipment is operating, determine the operating rate and determine if the operating rate is normal. If the equipment is not operating, determine the reason for the outage.

This information is provided by registration number later in the report.

9. Identify any new or unregistered equipment or any changes or modifications to existing equipment that may require a permit to construct. If changes have occurred that will result in an increase in emissions, notify the Permitting Program person assigned to the facility for further evaluation.

The facility did not construct any new installations since the last inspection that would affect air quality. The facility replaced all tank level indicators with digital units and disposed of the former units that contained mercury.

10. Conduct a post inspection meeting with the facility representative(s) and summarize your findings during the inspection.

I conducted a post inspection meeting with Ms. Syzmanski.

11. Risk Management Plan – Determine whether the facility uses and/or stores above the threshold quantities of the materials covered by the Plan.

The facility neither uses nor stores above the threshold limit of any chemical on the list.

12. Does the Facility burn waste oil? If yes, they are subject to the requirements of COMAR 26.11.09.10 – Requirements to Burn Used Oil and Waste Combustible Fluid as Fuel. This regulation went into effect on September 7, 1998.

The facility burns "Self-Manufactured Fuel" (SMF) as defined in the Comparable Fuels Exclusion of the Hazardous Waste Regulations. This fuel is generated as a byproduct of reactor operations. The still bottoms from toluene distillation in Kettle No. 121 contain a small fraction of toluene (<3.6%) and are burned as SMF. When the bottoms are concentrated to the point that they can no longer be burned, they are disposed of as hazardous waste. The facility also burns other high-boilers stripped from the Esterification Process, provided the compounds are not classified as hazardous waste.

Equipment Specific Issues

During the course of the inspection, make observations and review records as necessary to determine whether the facility is complying with the regulatory requirements and permit conditions (listed below) specific to each of the facility's registrations. As appropriate, attach copies of documents reviewed during the inspection.

This permit to operate is issued to cover the following registered installations:

MDE Registration Number	Category	Description
029-4-0074	Boiler	One (1) No. 6/No. 2 fuel oil, and Self-manufactured Fuel (SMF) fired boiler rated at 10.5 MMBTU per hour (Permittee Designation 250 C. B. Boiler).
029-4-0075	Boiler	One (1) No. 6/No. 2 fuel oil fired boiler rated at 29.3 MMBTU per hour (Permittee Designation 700 C. B. Boiler).
029-6-0010	Hot Oil Heater	One (1) No. 6/No. 2 fuel oil and SMF fired hot oil heater rated at 15 MMBTU per hour (Permittee No. 2).
029-6-0011	Hot Oil Heater	One (1) No. 6/No. 2 fuel oil and SMF fired hot oil heater rated at 14 MMBTU per hour (Permittee No. 3).
029-6-0012	Hot Oil Heater	One (1) No. 6/No. 2 fuel oil and SMF fired hot oil heater rated at 10 MMBTU per hour (Permittee No. 1).
029-7-0018	Plasticizer Manufacturing	One (1) Ester Manufacturing Plant consisting of three (3) process reactors (Permittee Designations K-121, K-127 and K-132) controlled by a regenerative thermal oxidizer (RTO) with a water scrubber as back-up control when the RTO cannot be operated.
029-9-0010	Wastewater Treatment	One (1) Wastewater Treatment Plant including an oil/water separator, clarifiers, an equalization tank, a bioreactor, and a sludge de-watering unit.
029-9-0013	Tank Farm	One (1) tank farm comprising bulk storage tanks as listed in Table E-1 under Part E of this permit.

Part A - General

(1) Except as otherwise provided in the following provisions, the permit to operate application received by the Department on October 25, 1999 and amended on November 1, 2000 is incorporated as part of this permit to operate. If there are any discrepancies between this permit and the application, the conditions on this permit will take precedence.

(2) Right of Entry:

The Secretary, Department of the Environment, or the Secretary's authorized representative, including inspectors of the Air and Radiation Management Administration and Kent County Health Department, shall be afforded access to the Permittee's property, at any reasonable time and upon presentation of credentials:

- (a) to determine compliance with the permit and applicable regulations;
 - (b) to sample any materials stored or processed on site, or any waste, or discharge into the environment regulated by this permit;
 - (c) to inspect any monitoring equipment required by an air quality permit or applicable regulation;
 - (d) to access or copy any records relevant to the Department's determination of compliance with an air pollution control requirement, including all documents required to be kept by this permit and by applicable regulations; and
 - (e) to obtain any photographic documentation or evidence.
- (3) Severability: If any provision of this permit shall be held invalid for any reason, the remaining provisions shall remain in full force and effect, and such invalid provisions shall be considered severed and deleted from the permit.
- (4) Nothing in this permit authorizes the violation of any rule or regulation or the creation of a nuisance or air pollution.
- (5) Additional and modified requirements may be imposed by the Department as part of the State Permit to Operate required by COMAR 26.11.02.13.

Part B - Applicable Requirements

- (1) This source is subject to all applicable Federal and local air pollution control requirements including, but not limited to, the following:
- (a) Record keeping and reporting requirements specified in the federal NSPS for volatile organic liquid storage vessels 40 CFR, Part 60, Subpart Kb; and
The toluene storage tank, Tank 602, is 15 feet in diameter and 16 feet high, with a capacity of 20,000 gallons. The tank dimensions and capacity are shown on construction drawings that are located in the maintenance office and the main office. Ms. Syzmanski also keeps the size and capacity data on her computer. The facility complies with the requirements of 40 CFR Part 60 Subparts A and Kb.

- (b) All reports and notifications required by NSPS 40 CFR Part 60, Subpart Kb shall be sent to the Air and Radiation Management Administration.
The facility complied with both notification and record keeping requirements.
- (2) This source is subject to all applicable, federally enforceable, State air pollution control requirements including, but not limited to, the following regulations:
- (a) COMAR 26.11.01.07C that requires that the Permittee report any incidence of excess emissions.
The facility did not report any incidents of visible emissions to the Department since the last inspection.
- (b) COMAR 26.11.02.09A which requires the Permittee to obtain a permit to construct if an installation is modified in such a manner that there is a change in the quantity, nature, or characteristics of emissions from the source from those provided in this permit.
- (c) COMAR 26.11.06.02C(1) which limits visible emissions to 20 percent opacity other than water vapor in an uncombined form.
- (d) COMAR 26.11.09.05A(1) which limits visible emissions to 20 percent opacity other than water vapor in an uncombined form from fuel burning equipment.
- (e) COMAR 26.11.09.06A(1) that prohibits the discharge of particulate matter from fuel burning equipment constructed before January 17, 1972 into the atmosphere in excess of the amounts shown in Figure 1 of COMAR 26.11.09.
- (f) COMAR 26.11.09.06A(1) that prohibits the discharge of particulate matter from fuel burning equipment constructed on or after January 17, 1972 into the atmosphere in excess of the amounts shown in Figure 2 of COMAR 26.11.09.
- (g) COMAR 26.11.09.07A(1)(b) which limits the sulfur content of residual fuel to 2.0% by weight. Note: Part C (5) of this permit imposes a more restrictive limit on the sulfur content of residual fuel used at this facility.
I reviewed the facility file containing sulfur certifications from Hess Corporation. The sulfur content of No. 6 fuel oil is less than 1%. Hess Corporation provides sulfur certifications for each fuel oil shipment it delivers to the facility. (Attachment 2)
- (h) COMAR 26.11.09.07A(1)(c) that limits the sulfur content of distillate fuel to 0.3% by weight.
There has been no waste oil burned at the facility since the last inspection. The facility performed a test to combust waste oil in 2004. This test demonstrated that burning waste oil produced severe operating problems. The facility has not attempted to burn waste oil since.

- (i) COMAR 26.11.19.02I that requires the Permittee to implement good operating practices to minimize Volatile Organic Compound (VOC) emissions into the atmosphere.
The facility's Safety Standards Manual contains a section on Good Operating Practices (GOP). The facility performs monthly plant-wide Safety and Housekeeping inspections and corrects any deficiencies found. The facility revised the GOP in 2009. Ms. Syzmanski will provide me with a summary of the changes during the first week of February 2010.
- (j) COMAR 26.11.19.16C which requires the Permittee to minimize leaks from VOC equipment and their components, including process equipment, storage tanks, pumps, compressors, valves, flanges and other pipeline fittings, pressure relief valves, process drains, and open-ended pipes.
The facility has a leak detection procedure in place. Bright yellow laminated tags that contain all the required information are used to identify both process leaks and steam leaks as well. I reviewed the leak reports since the last inspection and determined that all leak detection and repair procedures are being followed. The facility reported no process leaks in 2009. There were no leak tags observed during the inspection.
- (k) COMAR 26.11.19.30 which requires the Permittee to control emissions of Volatile Organic Compounds (VOC) from organic chemical production operations including the following requirements for premises discharging total uncontrolled VOC emissions of 100 pounds or more per day:
- (i) The Permittee shall duct each process vent and exhaust line from any installation with actual emissions of 20 pounds or more per day into a control device that has a VOC destruction or removal efficiency of at least 90 percent, overall.
Process vents and exhaust lines that discharge greater than or equal to 20 pounds of VOC per day are piped to the natural gas-fired Regenerative Thermal Oxidizer (RTO) that operates at approximately 99% control efficiency and is on stream 90-95% of the operating time.
- (ii) If the Permittee cannot achieve compliance because of an unavoidable outage or malfunction of the primary control device the Permittee shall either:
- (a) Discontinue operation until the primary control device is returned to proper service; or
- (b) Use a back-up control device that is approved by the Department.
The back up VOC control device is a water scrubber that has

a control efficiency of 60%.

- (iii) The back-up control device may not be used more than 10 percent of the annual operating time of the affected installation during any calendar year unless the Department approves a longer period.

The thermal oxidizer operated at 93% stream time since the last inspection. Stream time for the RTO is reported as an addendum to the annual Emissions Certification Report. (Attachment 3)

- (3) This source is subject to all applicable State only air pollution control requirements including, but not limited to, the following regulations:
- (a) COMAR 26.11.02.13A(16) that requires the Permittee to obtain and have in current effect a State permit to operate from the Department.
 - (b) COMAR 26.11.02.19C and 19D that require the Permittee to comply with the emission certification requirement.
 - (c) COMAR 26.11.06.08 and 26.11.06.09 that generally prohibit the discharge of emissions beyond the property line in such a manner that nuisance or air pollution is created.
 - (d) COMAR 26.11.09.10 that specifies requirements for the combustion of used oil and waste combustible fluid in fuel burning equipment.
 - (e) COMAR 26.11.15.05 that requires the Permittee to use the Best Available Control Technology for Toxics (T-BACT) to minimize toxic air pollutants.
 - (f) COMAR 26.11.15.06 that prohibits the discharge of toxic air pollutants to the extent that the emissions will unreasonably endanger human health.

Part C – Operating and Testing

General:

- (1) The Permittee shall maintain and operate all installations with potential to cause air pollution, and any associated air pollution control equipment, in such a manner as to ensure full and continuous compliance with all applicable regulations.
The facility operates all process equipment in accordance with the manufacturer's guidelines.
- (2) The Permittee shall properly maintain, and keep in good working condition, all control panel instrumentation and monitoring devices that the Permittee uses to determine if the air pollution control equipment is operating as designed. The Permittee shall keep all air pollution control

equipment properly maintained and in good working order so as to assure full and continuous compliance with all applicable regulations.

The facility properly maintains all control panel instrumentation and monitoring devices in good operating condition. Pollution control devices are serviced as part of the facility's preventive maintenance program.

- (3) Premises wide emissions shall not exceed the following limits unless the Permittee applies for a Title V - Part 70 Operating Permit:

- (a) Premises wide NO_x (nitrogen oxides) emissions shall not exceed 100 tons in any rolling 12-month period;
- (b) Premises wide SO_x (sulfur oxides) emissions shall not exceed 100 tons in any rolling 12-month period; and
- (c) Premises wide HAP (hazardous air pollutant) emissions shall exceed neither 10 tons of any single HAP nor 25 tons of any combination of HAPs in any rolling 12-month period.

The facility maintains 12-month rolling averages for NO_x, SO_x, single HAP, and combined HAPS emissions. The total emissions of NO_x, SO_x, single HAP, or combination of HAPS were all below major source thresholds. The facility complies with all Synthetic Minor permit requirements. (Attachments 4 & 5)

- (4) In accordance with COMAR 26.11.19.02I, the Permittee shall implement good operating practices to minimize emissions of VOC to the atmosphere.

- (a) Where applicable, good operating practices shall, at a minimum, include the following:

- (i) Provisions for training of operators on practices, procedures, and maintenance requirements that are consistent with the equipment manufacturers' recommendations and the source's experience in
- (ii) operating the equipment, with the training to include proper procedures for maintenance of air pollution control equipment;
Operators and supervisors are trained on any new procedures that are developed and added to the Safety Standards Manual. In addition, the facility provides periodic refresher training to its operators and supervisors regarding practices, procedures, and maintenance requirements in May of each year.
- (iii) Maintenance of covers on containers and other vessels that contain VOC and VOC-containing materials when not in use;

- (iv) As practical, scheduling of operations to minimize color or material changes when applying VOC coating or other materials by spray gun;
- (v) For spray gun applications of coatings, use of high volume low pressure (HVLP) or other high efficiency application methods where practical; and
- (vi) As practical, mixing or blending materials containing VOC in closed containers and taking preventative measures to minimize emissions for products that contain VOC.

The facility conducts monthly Safety and Housekeeping inspections to ensure that good operating practices are being maintained. All tanks whose capacity exceeds 2000 gallons and that contain VOC are equipped with conservation vents. All solvents were stored in closed-lid containers and solvent-laden cleaning rags and paper were stored in closed-lid containers.

(b) The Permittee shall:

- (i) Establish good operating practices in writing;
The facility updated the Safety and Housekeeping/Good Operating Practices Manual in 2009. Ms. Szymanski will provide a summary of the changes to me by the first week of February 2010.
- (ii) Make the written operating practices available to the Department upon request; and
Ms. Szymanski retains a copy of the Safety and Housekeeping Manual in her office. The manual is available on the facility's web page and is accessible to all employees.
- (iii) Display the good operating practices so that they are clearly visible to the operator or include them in operator training.
Copies of the Safety and Housekeeping Manual are kept in the operating areas to serve as a reference for operators and supervisors.

- (5) In accordance with COMAR 26.11.19.02I, the Permittee shall take all reasonable precautions to prevent or minimize the discharge of VOC into the atmosphere when cleaning process and coating application equipment, including containers, vessels, tanks, lines and pumps.

Where applicable, reasonable precautions for equipment cleanup shall, at a minimum, include the following:

- (a) Storing all wastes and waste materials, including cloth and paper that are contaminated with VOC, in closed containers;
All small VOC storage containers have spring-loaded lids and are kept closed when not in use and VOC-laden rags are kept in closed containers.

- (b) Preparing written standard operating procedures for frequently cleaned equipment, including when practical, provisions for the use of low VOC or non-VOC materials and procedures to minimize the quantity of VOC materials used;
 - (c) Using, when practical, enclosed spray gun cleaning, VOC-recycling systems and other spray gun cleaning methods that reduce or eliminate VOC emissions; and
 - (d) Using, when practical, detergents, high-pressure water, or other non-VOC cleaning operations to clean coating lines, containers, and process equipment.
The facility follows detailed operating and housekeeping policies and procedures when cleaning manufacturing equipment. The facility uses internal sprays to distribute the appropriate cleaning solvent to clean the reactors and recycles the cleaning solution back to the reactors as feedstock.
- (6) In accordance with COMAR 26.11.19.02I, the Permittee shall minimize VOC emissions into the atmosphere from VOC storage and transfer operations. Where applicable, the Permittee shall, at a minimum:
- (a) Install conservation vents or other vapor control measures on storage tanks with a capacity of 2,000 gallons or more, to minimize VOC emissions; and
All VOC storage tanks of 2000 gallons capacity or greater are equipped with conservation vents.
 - (b) Utilize vapor balance, vapor control lines, or other vapor control measures when VOCs are transferred from a tank truck into a stationary storage tank with a capacity greater than 10,000 gallons and less than 40,000 gallons that store VOCs or materials containing VOCs, other than gasoline, that have a vapor pressure greater than 1.5 psia.
The facility utilizes vapor balance lines during unloading of raw materials from railcars and trucks to storage tanks. I inspected the vapor balance hoses and product loading and unloading hoses and found them to be in good condition.
- (7) In accordance with COMAR 26.11.19.16, the Permittee shall perform the following to minimize VOC emissions from equipment leaks:
- (a) Visually inspect all components on the premises for leaks at least once each calendar month.
Leak inspections are conducted once per month by a team of inspectors and the results are logged.
 - (b) Tag any leak immediately so that the tag is clearly visible. The tag shall be made of a material that will withstand any weather or corrosive conditions to which it may be normally exposed. The tag shall bear an identification number, the date the leak was discovered, and the name of the person who discovered the leak. The tag shall remain in place until the leak has been repaired.

I reviewed the leak inspection procedures and sample inspection reports. The facility is using the same type of laminated tag to designate any leak location.

- (c) Take immediate action to repair all observed VOC leaks that can be repaired within 48 hours.

Records indicated that leaks are generally small and can be repaired within 48 hours, unless a shutdown is required to perform the repairs.

- (d) Repair all other leaking components not later than 15 days after the leak is discovered. If a replacement part is needed, the part shall be ordered within 3 days after discovery of the leak, and the leak shall be repaired within 48 hours after receiving the part.

This procedure is being followed.

- (e) Maintain a supply of components or component parts that are recognized by the source to wear or corrode, or that otherwise need to be routinely replaced, such as seals, gaskets, packing, and pipefittings.

I inspected the maintenance department parts inventory and found it to be adequate to repair any type of leaking process equipment.

- (f) Maintain a log that includes the name of the person conducting the inspection and the date on which leak inspections are made, the findings of the inspection, and a list of leaks by tag identification number.

Copies of the monthly inspections constitute the log for equipment leaks.

Components that cannot be repaired as required by COMAR 26.11.19.16 because they are inaccessible, or that cannot be repaired during operation of the source, shall be identified in the log and included within the source's maintenance schedule for repair during the next source shutdown.

Boilers and Hot Oil Heaters (4-0074, 4-0075; 6-0010, 6-0011, 6-0012)

- (8) The Permittee shall comply with the following unless the Permittee can demonstrate, to the satisfaction of the Department, that premises wide NO_x and SO_x emissions are each less than 100 tons in any rolling 12-month period at less restrictive limits:

- (a) The sulfur content of all residual (No. 6) fuel oil used shall not exceed 1.0% by weight;
The facility receives a sulfur analysis on every shipment of No. 6 fuel oil received. (Attachment 2)

- (b) Total residual and distillate fuel oil usage shall not exceed 1,195,000 gallons in any rolling 12-month period;
834,600 gallons of No. 6 fuel oil were combusted in 2009; the facility did not burn #2 fuel oil since the last inspection.

- (c) Total Self-Manufactured Fuel (SMF) usage shall not exceed 340,000 gallons in any rolling 12-month period; and
The facility burned 98,754 gallons of SMF in 2009.
- (d) Used oil shall not be used in any boiler or hot oil heater.
The facility has not burned used oil in its boilers or hot oil heaters since the 2004 trial burn.

One (1) Ester and Synthetic Lubricant Plant (7-0018)

- (9) The exhaust gases from the three (3) process reactors (Permittee Designations K-121, K-127 and K-132) shall vent through a regenerative thermal oxidizer (RTO) or a water scrubber prior to discharging to the atmosphere. The water scrubber shall only be used as a back-up control device when the RTO is inoperable or shut down for maintenance.
During the inspection, R-121 was undergoing a cleaning cycle; R-127 was processing a batch of B-988, a benzoate; and, R-132 was processing a batch of V-368, a polymeric. There were very slight organic odors in the operations building that remained in the reactor building. There were no railcars or tank trucks being unloaded during the inspection.
- (10) The combustion zone temperature of the RTO shall be maintained at 1400 °F or greater, during operation, unless the Permittee can demonstrate, to the satisfaction of the Department that compliance with the requirements of COMAR 26.11.19.30 can be achieved at a lower temperature.
The thermal oxidizer was in service, operating at a temperature of 1600-1819°F in the north and south zones, respectively. A computer continuously monitors the bed temperatures. An example is shown in Attachment 6. The temperatures are close to one another and, should a thermocouple fail, the oxidizer operates by controlling the remaining zone temperatures until the failed thermocouple can be replaced. There are three (3) thermocouples in the north bed and three (3) thermocouples in the south bed. The facility tracks oxidizer on stream time daily in a morning production meeting and calculates the stream time required to ensure 90% or above by year end on a daily basis.

One (1) Tank Farm (9-0013) and One (1) Wastewater Treatment Plant (9-0010):

- (11) The exhaust gases from each of the following listed individual tanks or tank groups shall vent through a carbon adsorption system consisting of at least two (2) carbon canisters connected in series prior to discharging to the atmosphere:
 - (a) The nine (9) wastewater treatment tanks (Permittee Designations T-301 through T-306, T-340, T-342, and T-343);
 - (b) The one (1) wastewater treatment tank (Permittee Designation T-318);

Carbon adsorption canisters removed with Department approval.

- (c) The one (1) wastewater treatment tank (Permittee Designation T-325);
- (d) The two (2) VOC storage tanks (Permittee Designations T-324 and T-339); and
- (e) The one (1) wastewater treatment tank (Permittee Designation T-341).

Carbon adsorption canisters removed with Department approval. The facility utilizes carbon adsorption to control breathing and working losses in their storage tanks.

- (b) At least once per calendar month, the Permittee shall measure the inlet and outlet air concentrations of the first carbon canister in series for each of the five (5) carbon adsorption systems. A portable VOC detector or equivalent device that is properly calibrated in accordance with the manufacturer's instructions shall be used to measure the air concentrations of VOC.

Inlet and outlet gas streams of the carbon drums are checked for breakthrough once per month using a Product Research, Inc. 2020 Pro VOC analyzer. A zero and span check is performed on the analyzer prior to each use.

- (13) Prior to, or when breakthrough is detected, the Permittee shall replace the first carbon canister with the second carbon canister in the series, and a new or regenerated carbon canister shall be added as the new second carbon canister in the series. Breakthrough is indicated when the outlet concentration of VOC from the first canister is greater than 15% of the inlet air concentration.

The facility follows all required procedures when VOC is detected in the outlet of the first drum. The drum switching procedure is documented on the work order.

- (14) The Permittee shall keep at least one replacement carbon canister (either new or regenerated) on-site at all times for each of the five (5) carbon adsorption systems.

The facility has 6 spare carbon canisters on site. A shipment of 4 drums was received on 1/20/10 from Siemens Water Technologies.

Part D - Monitoring, Record Keeping and Reporting

- (1) The Permittee shall continuously monitor and record the combustion zone temperature of the RTO used in the Ester (MDE Registration Number 029-7-0018) during operation.

Thermal oxidizer bed temperatures are monitored and recorded daily. (Attachment 6)

- (2) The Permittee shall keep the following records on-site for at least five years and shall make them available to the Department upon request:

- (a) Premises wide emissions of the following pollutants in tons per calendar month:

- (i) NO_x;
- (ii) SO_x;

- (iii) Most emitted individual HAP; and
 - (iv) Total HAPs.
- (b) Certifications from the Permittee's fuel supplier verifying the sulfur contents of residual
- (c) fuel and distillate fuel delivered to the plant.
- (d) Total residual and distillate fuel oil usage in gallons per calendar month.
- (c) Total self-manufactured fuel in gallons per calendar month.
- (e) RTO combustion zone temperature records.
- (f) The date measured, and inlet and outlet VOC concentrations determined, in parts per million (ppm), for each of the five (5) carbon adsorption systems.
- (g) The date that a carbon canister is replaced and the location where the replacement took place.
- (h) Good operating practices information as required by COMAR 26.11.19.02I.
- (i) Leak inspection logs as required by COMAR 26.11.19.16.
The facility complies with all record keeping requirements of Permit to Operate No. 029-00001A.
- (3) The Permittee shall keep readily accessible records showing the dimensions of each VOC storage tank subject to the requirements of 40 CFR 60, Subpart Kb and an analysis showing the capacity of each affected tank. The records shall be kept for the life of each vessel.
The construction drawing of the toluene storage tank and the tank inventory list are retained in the maintenance office and Ms. Szymanski's office, respectively.
- (4) The Permittee shall submit to the Department, not later than April 1, an emissions certification for the previous calendar year.
 - (a) Certification shall be on a form obtained from the Department.
 - (b) The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The certifying individual shall be:
 - (c) Familiar with each source for which the certification form is submitted;
and
 - (d) Responsible for the accuracy of the emissions information.

- (e) The emissions certification shall include the emissions of each regulated pollutant and the total of all regulated pollutants for each registered source of emissions.
The facility submitted its Certified Emissions Statement for 2008 on 3/24/09. The report contained all pertinent supporting documentation and was complete.
- (5) The Permittee shall keep the following records at the site for at least five (5) years in order to support the annual emissions certification report.
 - (a) the total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;
 - (b) an explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;
 - (c) amounts, types, and analyses of all fuels used;
 - (d) emissions data from continuous emissions monitors that are required by this subtitle or EPA regulations, including monitor calibration and malfunction information;
 - (e) identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:
 - (i) significant maintenance performed,
 - (ii) malfunctions and downtime, and
 - (iii) episodes of reduced efficiency of all the equipment;
 - (f) limitations on source operation or any work practice standards that significantly affect emissions; and
 - (g) other relevant information as required by the Department.
The facility maintains all operating and maintenance records as required.
- (6) By April 1 of each year, during the term of this permit, the Permittee shall certify in writing to the Department the results of an air toxics analysis for the previous calendar year. The air toxics analysis shall include either:
 - (a) a statement that the previously submitted toxics compliance demonstrations remain valid; or
 - (b) a new toxics compliance demonstration developed in accordance with the requirements

set forth under COMAR 26.11.15 and 16, if the Permittee has made changes to its operations that make the last submitted compliance demonstration invalid.

The facility performed a comprehensive air toxics review in August of 2005 to evaluate the effect of adding two new products, Truflex 453 and Truflex 479 to the Ester Manufacturing Plant (7-0018) operating schedule. The facility's revised air toxics compliance demonstration was reviewed by the Department and accepted.

- (7) The Permittee shall report periods of excess emissions to the Department as required by COMAR 26.11.01.07.

There were no periods of excess emissions reported by the facility in 2008.

Miscellaneous Attachments

Attachment 7: Fuel Burning Inspection Checklist – Boiler No. 2 (4-0075)

Attachment 8: Fuel Burning Inspection Checklist – Oil Heater No. 2 (6-0010)

Attachment 9: Distributed Generation Inspection Form (Generator Inventory)

Federal, Non-SIP Requirements: None

**STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION MANAGEMENT ADMINISTRATION**

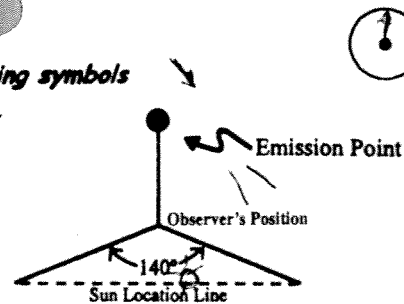
1800 Washington Boulevard, Suite 715
Baltimore, MD 21230-1720

REPORT OF OBSERVATION OF VISIBLE EMISSIONS

Source Layout Sketch
(Top View)

Draw North Arrow

Use the following symbols
in the diagram.



Date 1/27/10

Time at Start of Observation 10:17 AM

Facility Name GENOVIQUE SPECIALTIES CORPORATION

Address 10380 WORTON RD. CHESTEROWN MD 21620

County KENT

Type of Installation PLASTICIZER MANUFACTURING

Color of Plume CLEAR

Point of Discharge EXHAUST STACK 700 LB BOILER

Point of Observation _____

Steam Plume ☒ None

☐ Attached

☐ Detached

Sky Conditions CLEAR

Ambient Temperature 40°F

Wind Direction NORTH WEST

Wind Speed 8 MPH

Min	Sec	0	15	30	45	Min	Sec	0	15	30	45	Min	Sec	0	15	30	45
0						20						40					
1						21						41					
2						22						42					
3						23						43					
4						24						44					
5						25						45					
6						26						46					
7						27						47					
8						28						48					
9						29						49					
10						30						50					
11						31						51					
12						32						52					
13						33						53					
14						34						54					
15						35						55					
16						36						56					
17						37						57					
18						38						58					
19						39						59					

Remarks: OBSERVATION PERFORMED IN ACCORDANCE WITH EPA METHOD 9.



HESS CORPORATION
1 Hess Plaza
Woodbridge, NJ 07095

Steve King
Manager, Technical Services
Phone: (732) 750-6707
Fax: (732) 750-6022
SKing@hess.com

JSZYMANSKI@GENOVIQUE.COM

PRODUCT SULFUR CERTIFICATION
6 FUEL OIL 1%

GENOVIQUE SPECIALTY CORP.
CHESTERTOWN, MD.

DATE: 12/30/09
ACCT#: 326759
BOL#: 173409

<u>TEST</u>	<u>ASTM METHOD</u>	<u>RESULTS</u>
SULPHUR, WT %	D-4294	0.968
VISCOSITY	D-445	174.800
BTU/GAL:	D-240	151,946
ASH, WT%	D-482	≤ 0.1
FLASH POINT, ° F	D-93	216

THIS ANALYSIS WAS DETERMINED FROM SAMPLES OBTAINED FROM OUR
STORAGE AT HESS CORPORATION'S TERMINAL LOCATED AT :

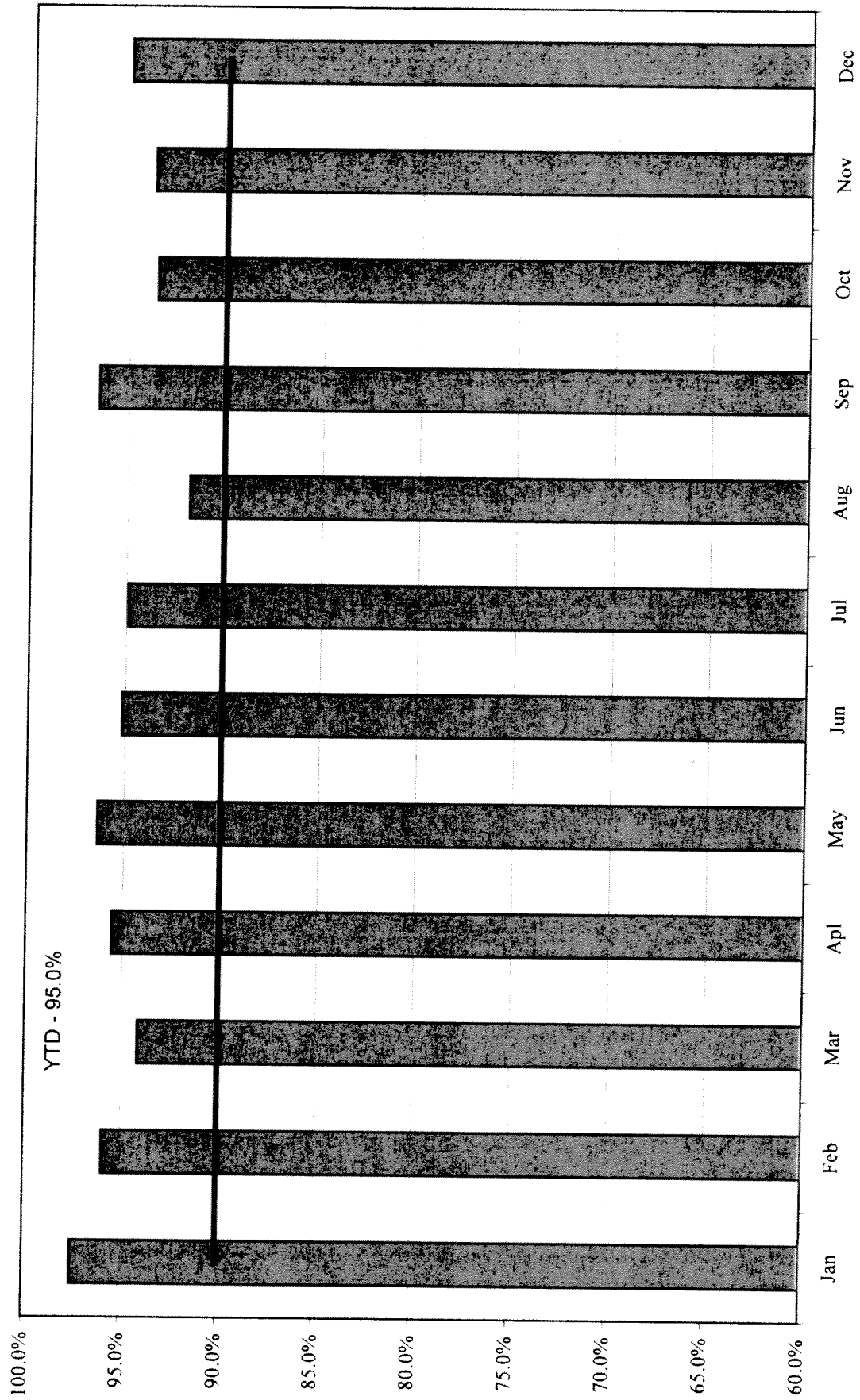
6200 PENNINGTON RD.
BALTIMORE, MD.

Should you have any questions please contact me via phone at (732) 750-6707, email
SKing@hess.com, or fax at (732) 750-6022.

Sincerely,

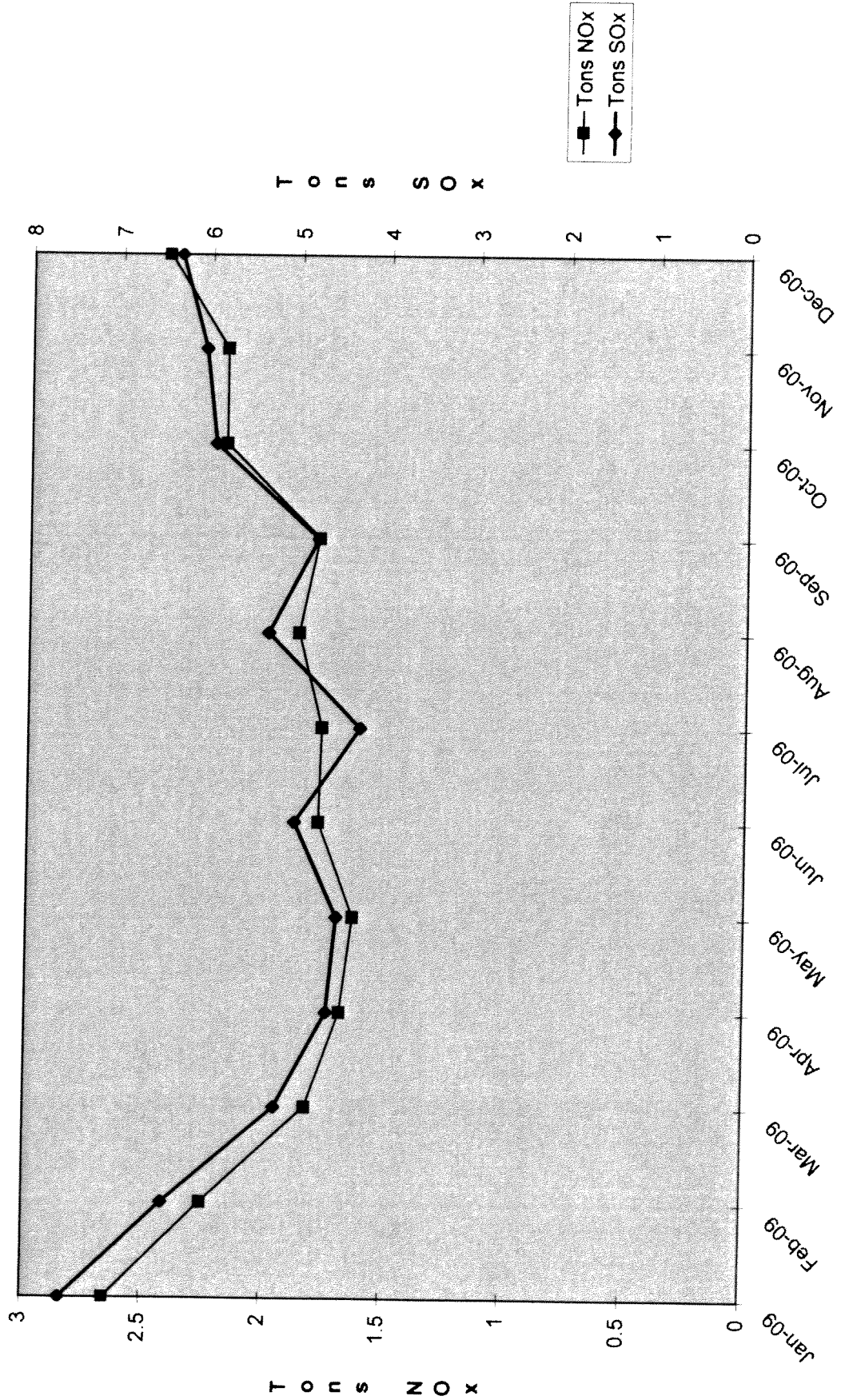
Hess Corporation
Manager, Technical Services

Thermal Oxidizer Onstream Time - 2009



SOx NOx Monthly

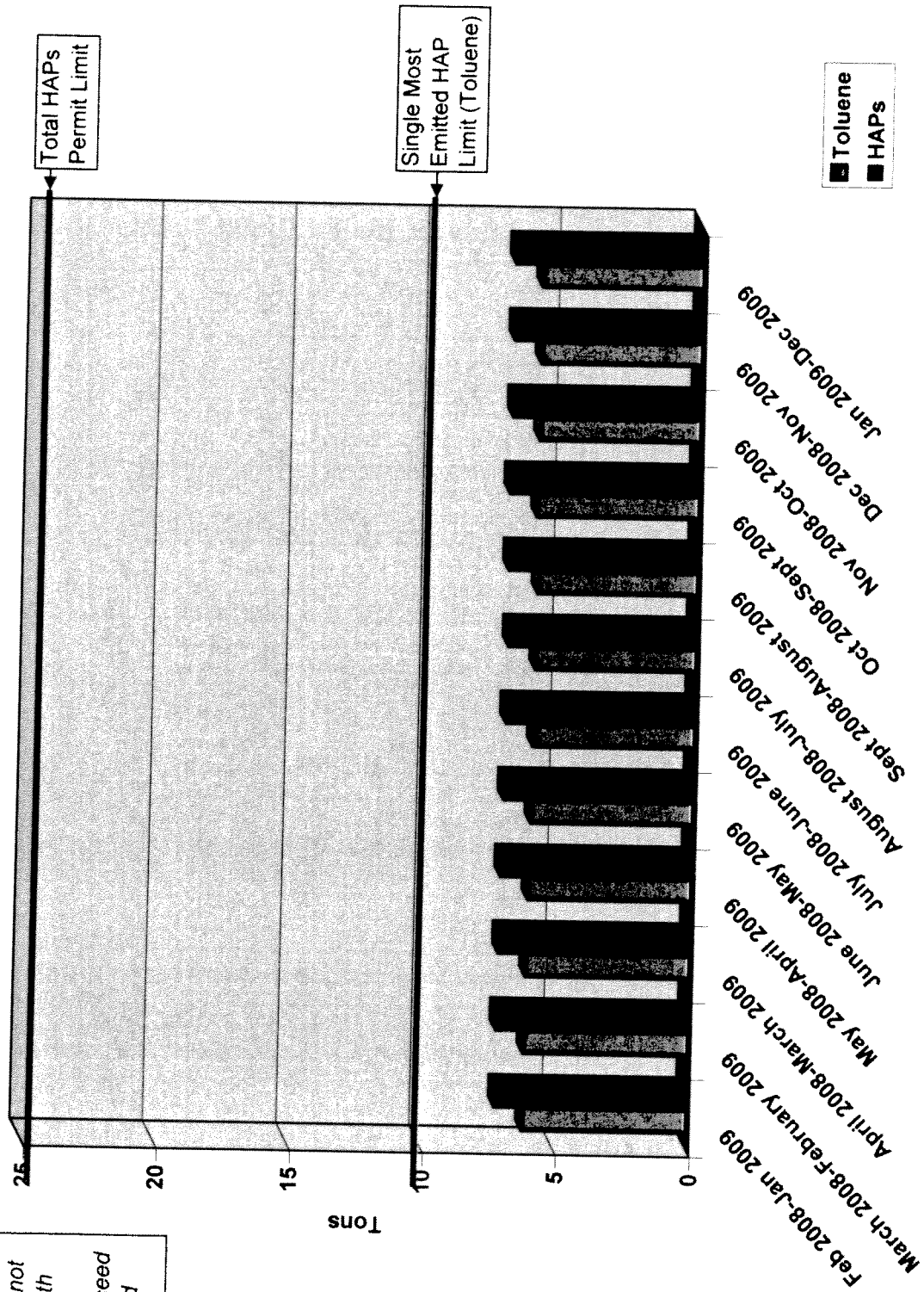
**NOx and SOx Tons/Month
January 2009 - December 2009**



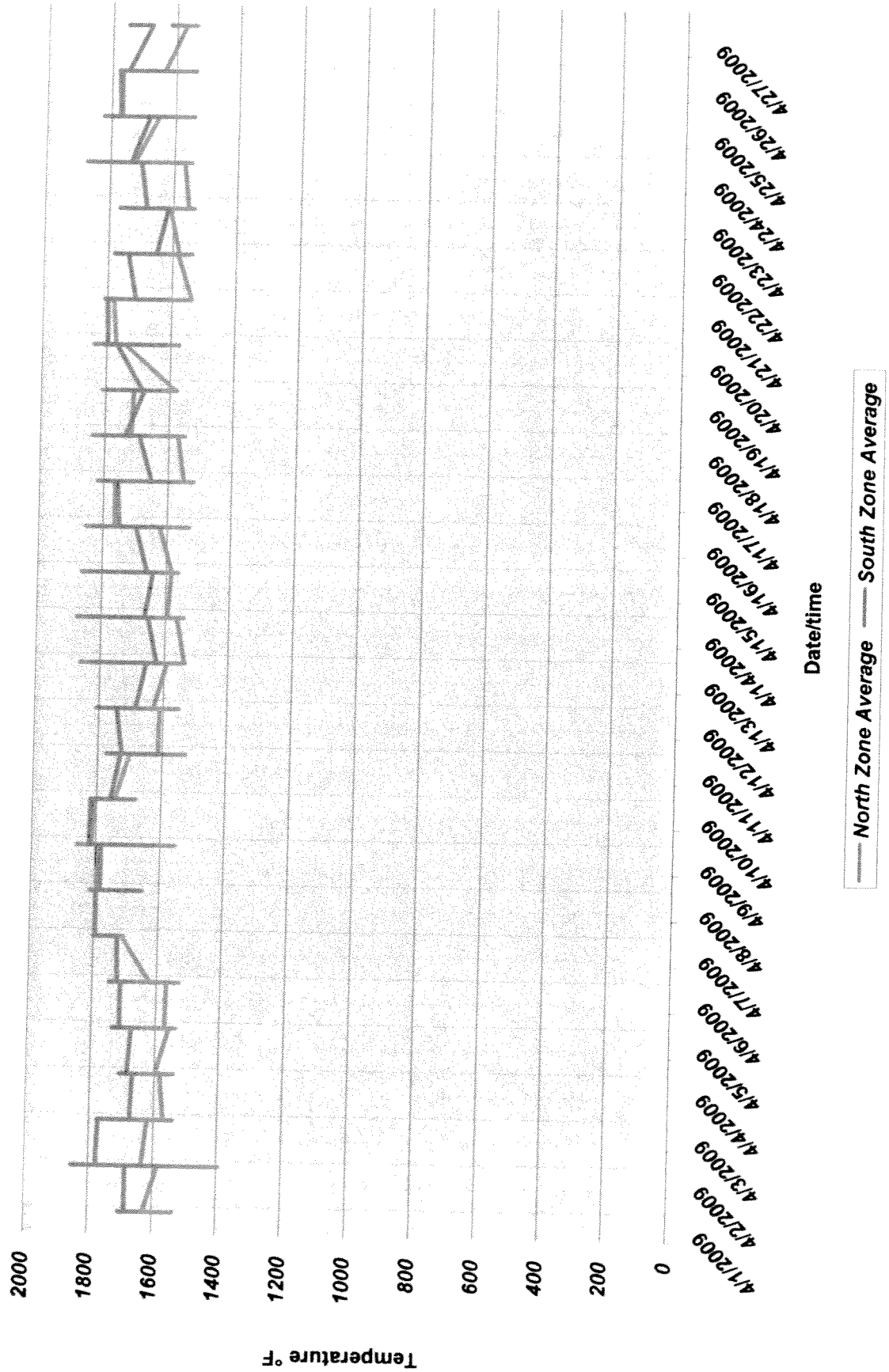
HAPs and Toluene 12 Month Rolling Average

HAP Permit requirements:

- *Any single HAP (toluene most emitted HAP at the Chestertown Plant) cannot exceed 10 tons/12 month period
- *Total HAPs cannot exceed 25 tons/12 month period



April 2009 Thermal Oxidizer Average Bed Temperature



FUEL BURNING INSPECTION CHECKLIST
(Boilers only)

Attachment: 7

Facility: Velsicol Chemical Corporation
Number: 029-0001
Registration no.: 4-0075
Facility's unit designation: Boiler No. 2
Rated capacity: 29.3 MBH
Fuel(s) used: No. 6 Fuel Oil
Control equipment: None

OPERATING DATA

Operating rate: 125 psig. Pressure, 400°F Exhaust Temperature
Fuel used (type and rate) Approximately 56 gph No. 6 fuel oil

REQUIREMENTS

1. **Visible Emissions:**
Applicable standard: 20% Opacity
Method of compliance determination:
Visible emission observation (ARMA 19 attached) (Attachment 1)
Other (describe)
2. **Particulate Matter**
Applicable standard: No particulate standard as indicated in COMAR 26.11.09.09.
Method of compliance determination: N/A
3. **Sulfur Oxides:**
Applicable standard: N/A as provided in COMAR 26.11.09.07
Method of compliance determination:
Review fuel records: (attached) N/A
Other (describe)
4. **Nitrogen Oxides:**
Applicable standard: N/A as provided in COMAR 26.11.09.08
Method of compliance determination:
Review of records: (attached)
Other (describe):
5. **Reporting:**
Applicable requirements: Quantify emissions based on fuel usage and days of operation
Methods of compliance determination: Certified Emissions Statement contains boiler emissions with fuel usage and days of operation
6. **Records Review:**
Applicable requirements: Fuel usage and days of operation must be documented.
Methods of compliance determination: Plant records for fuel usage and days of operation were reviewed and coincided with the basis for Certified Emissions Statement calculations.

FUEL BURNING INSPECTION CHECKLIST
(Boilers only)

Attachment: 8

Facility: Velsicol Chemical Corporation
Number: 029-0001
Registration no.: 6-0010
Facility's unit designation: Heater No. 2
Rated capacity: 15 MBH
Fuel(s) used: No. 6 Fuel Oil/SMF
Control equipment: None

OPERATING DATA

Operating rate: 60 psig Oil Supply Pressure, 422°F Exhaust Temperature.
Fuel used (type and rate) Approximately 28.2 gph No. 6 fuel oil

REQUIREMENTS

1. **Visible Emissions:**
Applicable standard: 20% Opacity
Method of compliance determination:
Visible emission observation (ARMA 19 attached) (Attachment 1)
Other (describe) _____
2. **Particulate Matter**
Applicable standard: No particulate standard as indicated in COMAR 26.11.09.09.
Method of compliance determination: N/A
3. **Sulfur Oxides:**
Applicable standard: N/A as provided in COMAR 26.11.09.07
Method of compliance determination:
Review fuel records: (attached) N/A
Other (describe) _____
4. **Nitrogen Oxides:**
Applicable standard: N/A as provided in COMAR 26.11.09.08
Method of compliance determination:
Review of records: (attached)
Other (describe): _____
5. **Reporting:**
Applicable requirements: Quantify emissions based on fuel usage and days of operation
Methods of compliance determination: Certified Emissions Statement contains boiler emissions with fuel usage and days of operation
6. **Records Review:**
Applicable requirements: Fuel usage and days of operation must be documented.
Methods of compliance determination: Plant records for fuel usage and days of operation were reviewed and coincided with the basis for Certified Emissions Statement calculations.

DRAFT

ATTACHMENT 9

Distribution Generation Inspection Form

Complete with all inspections

Facility Name: GENOVIQUE SPECIALTIES CORP

Date of inspection: 1/27/10

Facility Number: 029-0001

Inspector name: GREG FRANZONI,

Main Contact Name: JOANNE SYZMAWSKI

Phone # 1-410-778-1991 Ex. 252

Currently Registered or Permitted Generators

Registered/Permitted generators MDE Registration Number/ Make/Model	Size kW, hp	Emergency only? Y/N, detail	May 1 st -Sep 30 th 2009 operating hours
ALLIS CHALMERS Mod. AC 21000	200 kW	yes / POWER Failures	445.2 to 455.6
ONAN/DJG L/8832D	12 kW	yes / To Heat Pipes of Waste Water	105.2 to 166.1

Comments:

New, Non-Registered, or Non-Permitted Generators If "emergency only" list generators greater than 500 hp(373kW)

New/Removed N/R, date	Generator Make/Model	Size kW, hp	Emergency only? (Y/N), detail

Comments:

Upon completion please return form to John Artes 410-537-4232

January 15, 1997

Compliance Evaluation Inspection Report



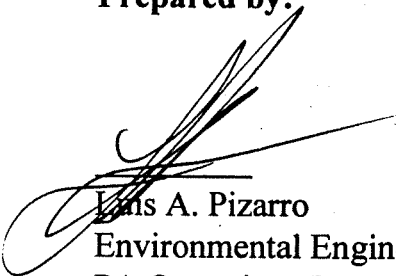
26086

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

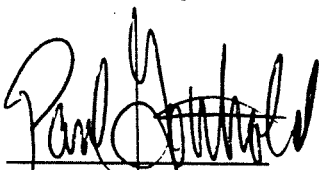
COMPLIANCE EVALUATION INSPECTION REPORT
January 15, 1997 Inspection
Velsicol Chemical Corporation
MDD001890060

V
1
1-15-97

Prepared by:


Luis A. Pizarro
Environmental Engineer
PA Operations Branch Branch

Reviewed by:


Paul Gotthold, Chief
PA Operations Branch

Date prepared final: September 2, 1997

On January 15, 1997 the U.S. Environmental Protection Agency, Region III (EPA), accompanied by the Maryland Department of the Environment (MDE) conducted a Compliance Evaluation Inspection at Velsicol Chemical Corporation (Velsicol) in Chestertown, Maryland. The purpose of this inspection was to evaluate Velsicol's compliance with the Boiler and Industrial Furnace regulations (40 CFR 266.100 et seq.), which regulates the thermal treatment of hazardous waste. The inspection was unannounced. Personnel participating in this inspection included the following:

Luis A. Pizarro, U.S. EPA, Region III
Andy Clibanoff, U.S. EPA, Region III
Eugene DeJoise, MDE
Mike McGeehan, A.T. Kearney (EPA Contractor)
John J. Giblin, Velsicol, Manager Environmental Health & Safety

EPA Region III retained A.T. Kearney to provide assistance in coordinating and conducting sampling and analysis of feed streams. The report prepared by A.T. Kearney is included as Attachment A.

I. Facility Description

Velsicol manufactures monomeric and polymeric plasticizers used in colorants and coatings. In addition, Velsicol manufactures synthetic lubricating oils and greases. Liquid residues from the manufacturing operations are classified as hazardous waste due to ignitability characteristic. Velsicol personnel refer to these hazardous wastes as waste light ends (WLE).

Velsicol is authorized to burn WLE in four units: a Cleaver Brooks 250 HP boiler, a 10M Btu/hr Eclipse Lookout hot oil system, and two 14-million Btu/hr Eclipse Lookout hot oil systems. None of the units are equipped with an air pollution control system. Operating conditions for the units are currently limited by a Certification of Compliance dated October 31, 1995, as required by 40 CFR §266.103.c.

Each of the hot oil systems provides heat to dedicated chemical production reactors. The Cleaver Brooks boiler provides process steam and space heating for the entire facility. All the units are equipped with a parallel feeding system that allows switch over from WLE to fuel oil.

WLE is transferred from the manufacturing operations to a storage tank area that subsequently feeds the boilers. The tank area consists of a horizontal 16,000-gallon tank (Tank #339); a vertical 12,000-gallon tank (Tank #324); and a 6,000 gallon emergency

tank (Tank #321). WLE is received in Tank #339, a holding tank, from the manufacturing process. Tank #324 is used as the feed tank for each of the combustion units through a recirculating loop.

II. Compliance Evaluation

For the purpose of compliance evaluation EPA requested Velsicol to provide the information contained in the "Requested Information" form in Attachment B. EPA and MDE also conducted a visual inspection of the hazardous waste storage and containment areas, the boiler house and the control room for the boiler house.

The January 15, 1997 inspection and the subsequent review of the information gathered during the inspection form the basis for the following compliance evaluation.

A. Regulated Constituents Characterization

Velsicol conducts an appropriate level of characterization to demonstrate compliance with the feed rate limits in the Certification of Compliance (CoC). Velsicol analyzes one sample per month to characterize the waste burned in that month. For each date under evaluation Velsicol provided a copy of the BIF feed rate calculation using analytical results of one sample per month to calculate the feed rate on individual constituent at maximum feed rates. This analysis was performed for all four units.

Ash was the only constituent consistently detected in the monthly samples. Chlorine, silver cadmium and chromium were detected in at least one monthly sample. All other regulated metals were not detected in any of the monthly samples. Based on the detected concentrations of regulated constituents and the maximum feed rates of hazardous waste, Velsicol operated the boilers within the CoC limits for the dates under evaluation.

As part of the inspection, EPA sampled the waste feed. The analysis of the sample resulted in non-detectable concentration for all metals and chlorides. Ash content of the sample was 315 ppm.

B. Operating Parameters Monitoring

For each date that EPA requested operating data, Velsicol provided "Process Data" reports. On these reports, Velsicol documented minute-by-minute values of the regulated operating parameters (i.e., CO and hazardous waste feed rates) for

each unit. These reports show that the units were operated within the CoC limits on all dates evaluated.

C. Automatic Waste Feed Cut off (AWFCO) System

Velsicol has established interlocks to the AWFCO system at values lower than the CoC limits (i.e., carbon monoxide (CO) interlock is 50 ppm, the CoC limit is 100 ppm). Records evaluated show the boilers have had instances of AWFCO's caused by the CO interlock.

Velsicol also provided the "Automatic Waste shut off test record" for each unit for the dates evaluated. The record shows the actual interlock set point, the value during the test and the value at which the system was tested. All forms were signed and dated by the operator. The records evaluated show that the system "passed" all the weekly test conducted.

During the period from 9/18/96 to 9/30/96 the Cleaver Brooks boiler burned hazardous waste for more than seven days without a testing of the AWFCO system. Velsicol noted the inconsistency and recorded the event on a "Non-conformance report form" dated 9/30/96 and signed by Mr. Steve Dodson. The report describes the circumstances leading to the missed testing but does not describe actions taken to prevent recurrences. (See Section III.)

D. Continuous Emission Monitoring (CEM) System

Velsicol provided copies of the monthly "CEM LOG/WLE" for all the units, which document the daily calibration checks and daily operational audits to the CEM systems. The forms show that the systems calibration were checked and are functional. The forms do not include information documenting the actual results of the daily calibration checks. (See section III.)

EPA's review of the Performance Specification test conducted in July 1996 shows that the CEM systems meet the required performance specifications.

E. Inspections

The inspections of the boilers and associated equipment are documented in a dated "BIF Regulations Daily Inspection" and "Weekly Inspection" log sheets. The forms included the "types of problems" the inspector should look for in the area being inspected. During the EPA inspection, a leak was observed from the piping

in front of No. 2 hot oil unit. The leak was tagged and noted that the leak was first observed at 9:30 a.m. on January 16, 1997 (day of the inspection). A work order for repairs was prepared.

Inspection forms for the dates under evaluation were signed by the inspector and no anomalies were noted. During the CEI, no other deficiencies were noted in the storage tank area and the boilers.

F. Leak Detection and Repair - Subpart BB

Velsicol provided copies of records documenting the monthly monitoring of the "equipment" (i.e., valves, pumps, flanges, etc.) in contact with hazardous waste. No leaks were identified during that monitoring events. In addition, identification tags were observed during the CEI on equipment subject to monitoring and no leaks were observed by the inspectors.

G. Control of Air emission from storage tanks and containers - Subpart CC

Velsicol controls the organic vapors from Tank #325 with a carbon adsorption unit consisting of two drums of activated carbon in series. Attached to the first container is an indicator that changes color when the carbon is spent. When this occurs, the spent carbon container is removed, the second container in the series is moved to the first position, and a new container of activated carbon replaces the vacated second position in the series. Organic vapors from Tank #339 and #324 are sent to another carbon adsorption unit that is identical to the carbon unit tied into Tank #325. The spent carbon is managed as hazardous waste.

The system is currently installed, thus meeting the requirement of the effective date of the regulation, December 6, 1996. However, EPA did not conduct a detailed evaluation of the conformance of this system with the applicable requirements of 40 CFR §265.1085.

Velsicol uses DOT-approved containers, which is consistent with level I controls, as required by 40 CFR §265.1087.

H. Container Storage

At the time of the inspection Velsicol had nineteen 55-gallon drums in the storage container area. The area consists of a concrete pad with curbing on three sides and

no roof. At the time of the inspection the floor was covered with ice, frozen run-on water and the integrity of the floor could not be evaluated.

During the inspection MDE issued Velsicol a site complaint for storing hazardous waste in an area without containment designed to prevent run-on. Velsicol later provided MDE with records showing that the contents of all but one container was solid (e.g., no free liquids) materials and it was MDE interpretation that run-on control was not required. However, one container was liquid therefore required appropriate containment. See Section III.

III. ISSUES

A. On one occasion, Velsicol failed to test the automatic waste feed cut off system for the Clever brooks 250 HP boilers every seven days, which is inconsistent with 40 CFR 266.103(j). EPA recommends that Velsicol adopt the practice to perform testing of the Automatic waste feed cut off system as part of the restart operations of the boilers, if more than seven calendar days have passed since the last testing of the system. The purpose of the testing is to ensure compliant unit operation between tests.

B. Velsicol documentation of daily calibration checks of the CEM do not include information on the actual results of the daily calibration checks. Velsicol must document the results of the daily calibration check for each monitor, as required by 40 CFR Part 266 Appendix IX section 2.9.1.8.

C. Velsicol stored at least one 55-gallon drum in an area without containment designed to prevent run-on. This is inconsistent with COMAR26.13.03.05E(1), as described by COMAR 26.13.05.09H(2)

Attachment A

VELSICOL CHEMICAL CORPORATION
Chestertown, Maryland
EPA ID No. MDD001890060
TRIP REPORT

Submitted to:
Ms. Donna Saunders
U.S. Environmental Protection Agency
Region III
841 Chestnut Street
Philadelphia, PA 19107

Submitted by:
A.T. Kearney, Inc.
215 N. Presidential Blvd.
Bala Cynwyd, PA 19004

Work Assignment No.	: R03002.31
Contract No.	: 68-W4-0013
A.T. Kearney WAM	: Dan Irvin
Telephone No.	: 703-739-1659
EPA WAM	: Luis Pizarro
Telephone No.	: 215-566-3444

March 28, 1997

TABLE OF CONTENTS

	PAGE
1.0 INTRODUCTION	1
2.0 OBJECTIVES	1
3.0 SUMMARY OF SAMPLING ACTIVITIES	1
4.0 ANALYTICAL RESULTS SUMMARY	4
4.1 Total Metals	5
4.1.1 Sample Analysis	5
4.1.2 Quality Control Summary	5
4.2 Total Chloride	5
4.2.1 Sample Analysis	5
4.2.2 Quality Control Summary	5
4.3 Ash Content	5
4.3.1 Sample Analysis	6
4.3.2 Quality Control Summary	6
5.0 DEFICIENCIES NOTED, ACTIONS TAKEN AND RECOMMENDATIONS FOR FUTURE ACTIONS	6

TABLES

TABLE 1.0: ANALYTICAL RESULTS SUMMARY	7
---	---

ATTACHMENTS

ATTACHMENT A.1: Photographic Log

ATTACHMENT A.2: Field Log

ATTACHMENT A.3: Lancaster Analytical Data Package

ATTACHMENT A.4: Material Safety Data Sheet

1.0 INTRODUCTION

At the request of the Environmental Protection Agency (EPA), A.T. Kearney, Inc. provided technical support during an unannounced compliance inspection and conducted sampling activities at the Velsicol Chemical Corporation (Velsicol) facility in Chestertown, Maryland on January 15, 1997. The inspection and sampling events were performed to determine if the four boilers which burn hazardous waste fuel at Velsicol are in compliance with the "Boiler and Industrial Furnace" Rule (40 CFR Part 266, Subpart H).

This Trip Report documents the sampling activities performed by Mr. Michael McGeehan of A.T. Kearney and summarizes the analytical results provided by Lancaster Laboratories (Lancaster). The objectives of this sampling event are discussed in Section 2.0, and a summary of the sampling event is provided in Section 3.0. Analytical results from the sampling activities are presented in Section 4.0. Deficiencies noted, actions taken during the sampling event, and recommendations for further actions are presented in Section 5.0. The Photographic log documenting sampling activities is provided in Attachment A.1, and the Field Log is provided in Attachment A.2. Attachment A.3 contains the analytical results from Lancaster and copies of the chain-of-custody forms used for this sampling event. A material safety data sheet (MSDS) for the hazardous waste sampled is provided in Attachment A.4.

2.0 OBJECTIVES

The primary objective of this sampling event was to provide sampling support to EPA during an unannounced compliance evaluation inspection of the four industrial boilers at Velsicol. A.T. Kearney assisted in collecting information used by EPA to determine whether the boilers at the Velsicol facility are operating in compliance with the Boiler and Industrial Furnace (BIF) Regulations, 40 CFR Part 266, Subpart H.

3.0 SUMMARY OF SAMPLING ACTIVITIES

Sampling activities at Velsicol were conducted by Mr. Michael McGeehan of A.T. Kearney on Wednesday, January 15, 1997. This section provides a brief description of Mr. McGeehan's observations during the sampling event. A complete copy of the Filed Log is provided in Attachment A.2 of this Trip Report.

At 0645, Mr. McGeehan arrived at the A.T. Kearney Philadelphia Project Office in Bala Cynwyd, Pennsylvania to load the van for BIF inspection activities. Mr. McGeehan noted in

Velsicol Chemical Corporation
Trip Report
March 28, 1997

the field logbook that the temperature was approximately 35°F, and wind speed was light from variable directions.

At 0700, Mr. McGeehan proceeded to the Velsicol facility. At 0845, Mr. McGeehan arrived at the Velsicol facility. He proceeded to begin logbook preparation and sign the Health and Safety Plan in the parking lot. In addition, he calibrated the PID monitor with 100 ppm isobutylene gas. At this time, Mr. McGeehan donned a formaldehyde badge to monitor potential exposure to formaldehyde at the facility.

At 0850, Mr. Eugene DeJoise of the Maryland Department of Environmental Protection (MDDEP) arrived. Mr. DeJoise accompanied the EPA representatives during the inspection. Mr. DeJoise advised that he has been placed in charge of this facility for RCRA inspections by MDDEP. At 0955, Mr. Luis Pizarro and Mr. Andy Clibanoff of EPA Region III joined Mr. McGeehan and Mr. DeJoise in the facility lobby. At 0957, Mr. Jack Gibblin of Velsicol greeted the inspection team in the lobby. All representatives signed in the facility log at this time. The group proceeded to the conference room in the Administration Building to begin the introductory meeting.

At 1000, the meeting commenced and Mr. Pizarro explained the purpose of the visit and introduced all representatives. Mr. Gibblin indicated that the hazardous waste fuel burned is referred to as Waste Light Ends (WLE) at the facility. Mr. McGeehan indicated that he brought glassware for WLE collection however, a facility representative will need to fill the glassware for A.T. Kearney. Mr. Gibblin stated that Mr. Donnie Quinn would help with sample collection. Mr. Gibblin concluded the meeting with a brief health and safety discussion.

At 1015, Mr. Quinn joined the meeting. Mr. McGeehan and Mr. Quinn left the meeting to commence sampling activities. They proceeded to the A.T. Kearney van for transit to the Building 11 laboratory. Upon arrival, Mr. McGeehan collected a PID background reading outside Building 11. The reading was 0.1 ppm.

At 1024, Mr. Quinn and Mr. McGeehan went inside Building 11 to the Tank 324 area to collect the WLE samples from the Tank 324 recirculation line. The sampling valve for the WLE is located adjacent to Tank 324 (See Photograph Log, Attachment A.1). Mr. Quinn explained that the WLE exits Tank 324 from the bottom, goes through two filters, and then travels to the Unit No. 4 boiler in Building 11. Tank 324 contains approximately 12,000 gallons of WLE. A return line from the Unit No. 4 boiler is fed directly into the top of Tank 324. The sampling point removes the WLE material just after it has passed through the two filters and before it travels to Unit No. 4. Additional sampling points were reportedly located

closer to the individual boilers, however, due to a previous accident, sampling from the recirculation line was the preferred option.

A faint organic solvent odor was noted inside Building 11 near Tank 324. Mr. McGeehan set up the sampling zones, donned proper PPE and collected a pre-sampling PID reading of 1.5 ppm. Mr. Quinn began bleeding the recirculation line at 1027 into a three-gallon metal bucket. Mr. McGeehan took R₁P₁₃ (previous twelve photographs taken at another facility) facing north of Mr. Quinn bleeding the recirculation line. All photographs were taken with a Minolta Freedom III camera with 24 exposure Kodak 400 ASA film. Mr. Quinn bled the recirculation line twice for a total of approximately five gallons of WLE.

At 1035, Mr. Quinn commenced sample collection of WLE samples (VE-311-OL-01), which are to be analyzed for metals, total chloride, and ash content. The sample containers for total chloride and ash content were collected first; one, one-liter for A.T. Kearney, one, one-liter for Velsicol and extra sample volume for matrix/matrix spike duplicate (MS/MSD) samples for A.T. Kearney. The sample containers for total metals were filled next; one, one-liter for A.T. Kearney, one, one-liter for Velsicol and extra sample volume for MS/MSD samples for A.T. Kearney. Mr. McGeehan took photograph R₁P₁₄ facing north of Mr. Quinn collecting a one-liter WLE sample at the Tank 324 valve.

Mr. Quinn began collecting the WLE field duplicate sample (VE-311-OL-02) for A.T. Kearney at 1045. The one-liter sample container for total chlorides and ash content was filled first, followed by the one-liter sample container for total metals. All of the WLE samples consisted of a light greenish-yellow, single-phase, non-viscous liquid. Duplicate samples were not collected by Velsicol.

After the containers were filled and wiped down by Mr. Quinn, Mr. McGeehan checked each container with the PID monitor to ensure complete decontamination of the containers and placed a sample tag around each lid. Each sample container was then placed into a Ziploc bag and placed inside a cooler. Mr. Quinn was given custody of Velsicol's samples for the Tank 324 location. The PID monitor was equipped with a 5 ppm alarm which did not sound during WLE sampling activities. Prior to leaving this location, Mr. McGeehan took photograph R₁P₁₅ of the recirculation line at 1049.

At 1110, Mr. McGeehan proceeded to the van parked outside of the Building 11 laboratory to prepare WLE samples for shipment and collection of the field blanks. At 1115, Mr. McGeehan donned nitrile gloves and began collecting the field blank samples (VE-311-FB-01) for A.T. Kearney at the van, parked outside of the Building 11 laboratory. The one-liter sample container for total chlorides analysis was filled first with de-ionized water provided by Lancaster. This sample was not preserved. Next, the one-liter sample container, pre-

preserved with nitric acid by Lancaster for metals analysis, filled with de-ionized water. Both sample containers were labeled, a sample tag placed around each lid, put into a Ziploc bag and then placed inside a cooler with ice and a temperature blank. At 1119, Mr. McGeehan took photograph R₁P₁₆, facing west, of the field blank sampling location outside of Building 11.

At 1120, all sampling activities were completed and Mr. McGeehan re-packed all of the coolers. WLE samples were wrapped in bubble wrap and placed into Department of Transportation (DOT) exempt 3-M Safety-Send containers. Field blanks were wrapped in bubble wrap and preserved with ice. Mr. McGeehan removed his disposable PPE and placed it in a garbage bag. The garbage bag with all of the disposable PPE and used decontamination supplies was given to Velsicol personnel for proper disposal by the facility.

At 1200, Mr. McGeehan drove the van back to the visitor's parking lot and parked it. Mr. McGeehan returned to the conference room to rejoin Mr. Gibblin and EPA and MDDEP inspection representatives.

At 1230, the close-out meeting began. Mr. Gibblin signed the chain-of-custody forms indicating receipt of WLE split samples. Mr. McGeehan gave a copy to Mr. Gibblin. Mr. Gibblin handed Mr. McGeehan a copy of the MSDS for the WLE waste. Mr. McGeehan left the meeting at 1245 and signed out of the facility log. In the van, Mr. McGeehan removed the formaldehyde badge worn during the sampling activities and inspected it. No exposure was indicated on the badge. Mr. McGeehan updated the logbook and left the facility.

4.0 ANALYTICAL RESULTS SUMMARY

Two liquid waste samples were collected on January 15, 1997 at the Velsicol facility and were sent to Lancaster Laboratories (Lancaster) for analysis. Liquid waste samples were analyzed for total metals, chloride and ash. Aqueous sample VE-311-FB-01 was also analyzed for total metals, chloride and ash. The results of the analyses conducted on the samples collected have been summarized in Table 1. Copies of the data package and chain-of-custody forms have been included in Attachment A.3.

The analytical data obtained from the January 15, 1997 sampling event at Velsicol have been reported here. It is critical to note that, as requested by the EPA Work Assignment Manager, the data has not been validated. Therefore, no conclusions concerning the validity or legal defensibility of the data are made or implied in this report. In addition, all information presented in the "Quality Control Summary" sections below is strictly as reported by Lancaster and has not been verified nor has any assessment of the impact of these issues on the usability of the data been made.

4.1 Total Metals

The following samples from the Velsicol sampling event were analyzed for total metals : VE-311-OL-01, VE-311-OL-02 and VE-311-FB-01. Table 1.0 provides a summary of the analytical results for these samples.

4.1.1 Sample Analysis

The two liquid waste samples from the Velsicol sampling event were extracted by Lancaster according to EPA SW-846 Method 3050 and analyzed according to EPA SW-846 Methods 6010A, 7060A, 7471A, and 7740. The one aqueous sample was extracted according to EPA SW-846 Method 3005A and analyzed according to EPA SW-846 Methods 6010A and 7470A. The analytical results are listed in Table 1.0.

4.1.2 Quality Control Summary

The arsenic and selenium post digestion spike recovery for samples VE-311-OL-01 and VE-311-OL-02, were outside the QC limits of 80 to 120 percent.

For the matrix spike and matrix spike duplicate analyses of sample VE-311-OL-01, the recovery for antimony was outside the QC limits of 80 to 120 percent.

4.2 Chloride

The following samples from the Velsicol sampling event were analyzed for chloride: VE-311-OL-01, VE-311-OL-02 and VE-311-FB-01. Table 1.0 provides a summary of the analytical results for these samples.

4.2.1 Sample Analysis

The three samples from the Velsicol sampling event were analyzed by Lancaster by ion chromatography. The analytical results are listed in Table 1.0

4.2.2 Quality Control Summary

There were no deficiencies noted for the chloride analysis.

4.3 Ash

The following samples from the Velsicol sampling event were analyzed for ash: VE-311-OL-01, VE-311-OL-02 and VE-311-FB-01. Table 1.0 provides a summary of the analytical results for these samples.

4.3.1 Sample Analysis

The three samples from the Velsicol sampling event were analyzed by Lancaster according to ASTM Method D3174. The analytical results are listed in Table 1.0

4.3.2 Quality Control Summary

There were no deficiencies noted for the ash analysis.

5.0 DEFICIENCIES NOTED, ACTIONS TAKEN AND RECOMMENDATIONS FOR FUTURE ACTIONS

All sampling activities conducted and observed by A.T. Kearney, Inc. representatives were conducted in accordance with the approved Work Plan, QAPjP, Sampling and Analysis Plan, and Health and Safety Plan. No other concerns were identified by A.T. Kearney regarding the sampling activities observed.

Velsicol Chemical Corporation
Trip Report
March 28, 1997

TABLE 1.0: ANALYTICAL RESULTS SUMMARY

Project: R03002-31/Velsicol			
Laboratory: Lancaster Laboratories			
A.T. Kearney Sample Number	VE-311-OL-01	VE-311-OL-02	VE-311-FB-01
Laboratory Sample Number	2647878	2647882	2647883
Sample Location Description	Recirculation line of Tank 324	Duplicate VE-311-OL-02	Field Blank
Remarks	Liquid Fuel Waste	Liquid Fuel Waste	
Matrix	Organic Liquid	Organic Liquid	D.I. Water
BIF Metals	mg/kg	mg/kg	mg/l
Antimony	4.4 U	4.4 U	15.0 U
Arsenic	0.18 U	0.18 U	2.7 U
Barium	4.4 U	4.4 U	2.2 U
Beryllium	0.15 U	0.15 U	1.3 U
Cadmium	0.26 U	0.26 U	2.7 U
Chromium	0.93 U	1.2 B	4.3 U
Lead	4.7 U	4.8 U	18.0 U
Mercury	0.028 U	0.028 U	0.043 U
Nickel	0.91 U	0.91 U	5.4 U
Selenium	0.12 U	0.12 U	4.0 B
Silver	0.89 U	0.89 U	3.6 U
Thallium	27.6 U	27.8 U	170 U
Total Chloride	ppm	ppm	ppm
Chloride (Organic and Inorganic)	20 U	20 U	20 U
Ash	ppm	ppm	
Ash content	315	694	0.02% U

Bold Text: value is above detection limit.

bcc: Full copies of the report are available upon request. Please contact Pat Russell if you desire a complete copy.

—
P. Derocher (cover letter only)

B. Christian (cover letter only)

P. Russell (cover letter only)

ATTACHMENT A.1

**BIF SAMPLING AND ANALYSIS
TECHNICAL SUPPORT
PHOTOGRAPHIC LOG**

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN, MARYLAND**



Photo No.:	R ₁ P ₁₃	Work Assignment No.:	R03002.31
Photographer:	M. McGeehan	Time:	1028
Site Name:	Velsicol Chemical Corp.	Site Location:	Chestertown, MD
Direction:	North	Date:	January 15, 1997
Description:	Mr. Donnie Quinn, a Velsicol employee, bleeding WLE from the re-circulation line that connects the Unit No. 4 boiler and Tank 324.		



Photo No.:	R ₁ P ₁₄	Work Assignment No.:	R03002.31
Photographer:	M. McGeehan	Time:	1035
Site Name:	Velsicol Chemical Corp.	Site Location:	Chestertown, MD
Direction:	North	Date:	January 15, 1997
Description:	Mr. Quinn collecting a WLE sample from the re-circulation line.		

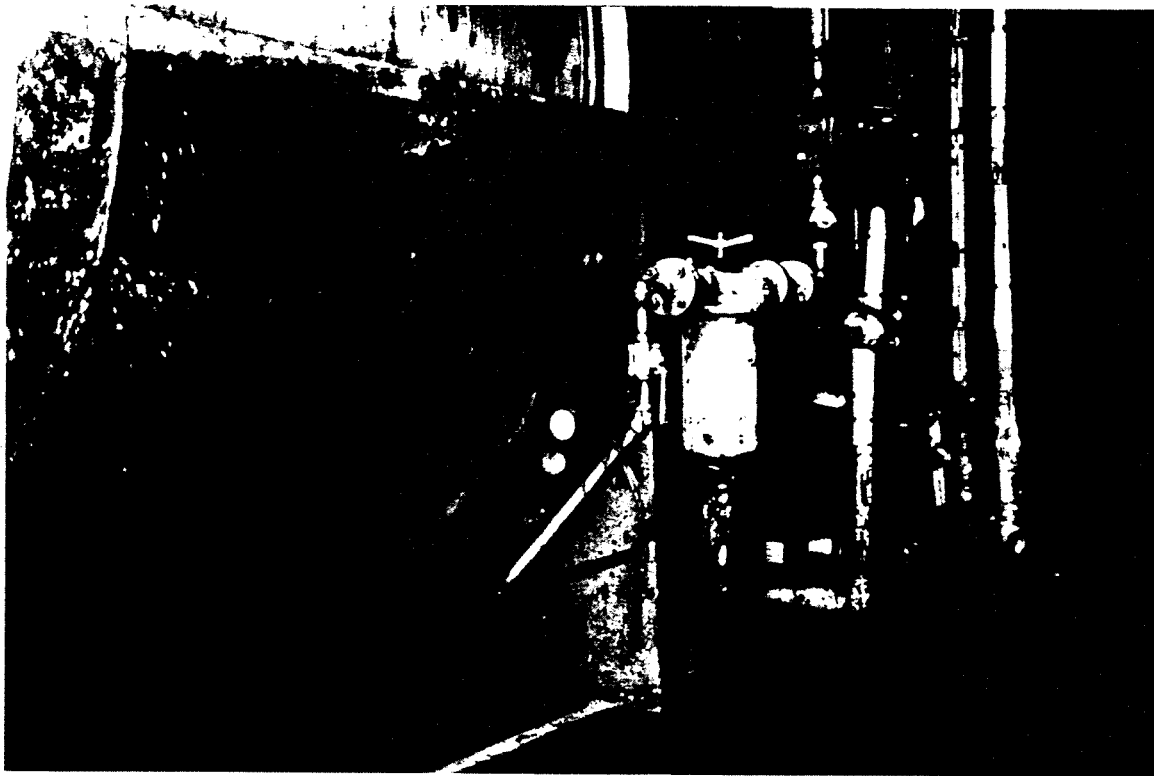


Photo No.:	R ₁ P ₁₅	Work Assignment No.:	R03002.31
Photographer:	M. McGeehan	Time:	1049
Site Name:	Velsicol Chemical Corp.	Site Location:	Chestertown, MD
Direction:	Northeast	Date:	January 15, 1997
Description:	View of the re-circulation line sampled. Tank 324 is located in the left foreground of the photograph.		



Photo No.: R₁P₁₆
Photographer: M. McGeehan
Site Name: Velsicol Chemical Corp.
Direction: West

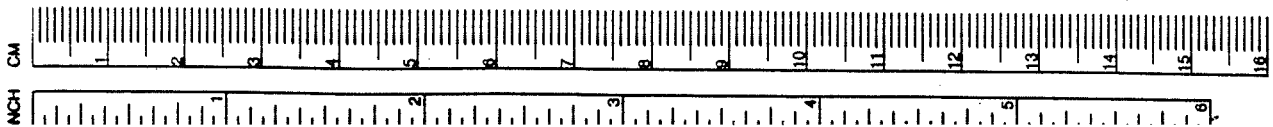
Work Assignment No.: R03002.31
Time: 1119
Site Location: Chestertown, MD
Date: January 15, 1997

Description: View of the field blank sampling location along the east side of Building 11. The liquid on the ground in the center of the photograph is natural precipitation.

ATTACHMENT A.2

**BIF SAMPLING AND ANALYSIS
TECHNICAL SUPPORT
FIELD LOG**

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN, MARYLAND**



MEASUREMENT CONVERSIONS

IF YOU KNOW	MULTIPLY BY	TO FIND
LENGTH		
inches	2.540	centimeters
feet	30.480	centimeters
yards	0.914	meters
miles	1.609	kilometers
millimeters	0.039	inches
centimeters	0.393	inches
meters	3.280	feet
millers	1.093	yards
kilometers	0.621	miles
WEIGHT		
ounces	28.350	grams
pounds	0.453	kilograms
grams	0.035	ounces
kilograms	2.204	pounds
VOLUME		
fluid ounces	29.573	milliliters
pints	0.473	liters
quarts	0.946	liters
gallons (U.S.)	3.785	liters
milliliters	0.033	fluid ounces
liters	1.056	quarts
liters	0.264	gallons (U.S.)
TEMPERATURE		
$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times .555$		
$^{\circ}\text{F} = (^{\circ}\text{C} \times 1.8) + 32$		
Length		
Inches	Decimals of foot	Millimeters
1/16	.0052	1.5875
1/8	.0104	3.1750
3/16	.0156	4.7625
1/4	.0208	6.3500
5/16	.0260	7.9350
Area		
3/8	.0313	9.5250
1/2	.0417	12.7000
5/8	.0521	15.8750
3/4	.0625	19.0500
7/8	.0729	22.2250
Volume		
1"	.0833	25.4000
2"	.1667	50.8000
3"	.2500	76.2000
4"	.3333	101.6000
5"	.4167	127.0000
Weight		
6"	.5000	152.4000
7"	.5833	177.8000
8"	.6667	203.2000
9"	.7500	228.6000
10"	.8333	254.0000
11"	.9167	279.4000
1 foot	1.0000	304.8000

This book belongs to A.T. Kearney, Inc.
(Address below)



Name Veliscal Chemical Corporation
Route 297
Address Chesterstown, MD 21620
(410) 778-1991
Phone EPA ID. No. MDD001890060

Project U.S. EPA BIF Inspection
G100 R03-002-31-03
EWAM - Mr. Lvis Pizero
841 Chestnut Street
Philadelphia, PA 19107
(215) 566-3444

"Rite in the Rain" - a unique all-weather writing surface created to shed water and to enhance the written image. Makes it possible to write sharp, legible field data in any kind of weather.

A.T. Kearney Sample -> Mike McGehee
101 Mainmac St - 6th Floor
a product of
J.L. DARLING CORPORATION, MA 02114
TACOMA, WA 98421-3886 USA (617) 720-7440

JANUARY 15, 1997

Wife: M^cIntosh (writer) - A.T. Kearney

CONTENTS

[illegible]

At 0645 AM, Mr. McGehean packed up the van at the Philly office of A.T. Kearney. At 0650, Mr. McGehean left for the facility. Weather sunny approx - 35°F, variable wind.

At 0830, Mr. McBeckon arrived at the Vehicle plant in Chestertown, MD. At this time, Mr. McBeckon organized his materials and began logbook preparation. Also at this time, he signed the health and safety plan and filled out the medical sheet.

At 0845, Mr. McKeen checked the PID monitor to assure it was working properly and re calibrated the unit. The unit was calibrated w/ 100 isobutylene - ^{100ppm}

At 9.50, Mr. McGeehan awaited the arrival of Mr. Pizzaro. Mr. McGeehan donned his formaldehyde badge at this time.

At 0900, Mr. McGehee met Mr. Eugene DeLoise from MD D.E.P. He stated that he is here to get training on BIF issues and he also is in charge of the facility for RCPA issues including inspection.



VELSICOL
CHEMICAL CORPORATION

10380 Worton Road
Chestertown, MD 21620

(410) 778-1991 Phone
(410) 778-5538 FAX

At 0845, Mr. McEachan donned a formaldehyde badge to monitor potential exposure to formaldehyde by supply activities.

At 0955 - Mr. Pizzaro and Mr. Chippinoff from U.S. EPA arrived at the facility.
At 0957 - Mr. Jack Givoley from Velvac met us at the sign-in area.

At 1000, started facility meeting ^{room}.
At 1012, small facility health & safety meeting.
At 1015, met Mr. Don Quinn of Velvac.
We will be collecting the WLE (waste light end) samples for A.T. Kearney.

At 1025, went to Laboratory in Building 11.
Waited for Donnie to prepare for sampling event.

At 1027, Donnie picked me up in lab and we walked to the Tank 324 recirculation line. Donnie bled 5+ gallons from the line. Mr. McEachan took a background reading outdoors it was 0.1 ppm.
Prior to bleeding the line, Mr. McEachan set up his supply zone and took a reading from the PID. ^{room} 1.5 ppm was picked up. There is a slight odor (organic) near the supply line.

MM 1/15/97

After bleed was completed. Donnie started sample collection at 1035. First, As₂/Ch₂l₂ were collected then metals. ATK, Velisol, GC sample, then Duplicates in that order. ATK collected ~~B~~ bottled here. 2 of those ~~B~~ were split samples for the facility. Duplicates were collected at 1045. Liquid was a light greenish-yellow single phase liquid, non-viscous also. Samples were wiped down by Mr. McEachra and Donnie and checked w/ the PID. No unusually high (over 5 ppm) readings were found. The samples were bagged, tagged and labeled. Donnie accepted the 2 Velisol samples.

At 1055, Mr. McEachra questioned Donnie about the Sampling Point. This ~~time~~ ^{line} recirculation line leads ~~from~~ ^{to} the Unit No. 4 boiler. The line is fed from the Tank 324. The recirc. line sampled was in Building 11. Tank 324 is 12,000 gallons. This waste (WLE) is the only waste fed into the Boiler. The boiler also burns oil but that is

not regulated. The facility has 3 waste oil tanks and one boiler.

~~At 1110~~ (NM) 1/15/92

Mr. McKeen took three photos of the sampling activity. Some roll of film as yesterday. 1028 (time)

Roll 1, Photograph 13 - shot north of Donnie bleed, W/E into 5 gallon bucket

Roll 1 Photograph 14 - shot north of Donnie collecting 73 fluid sample at 1035.

At 1049, NM took Roll 1, Photograph 15 of the recirculation line. Note stain on floor is W/E. Sump in floor looks like blind sump: facing North.

At 1110, NM prepared for Field Blank collection. The field blanks will be collected outside of Building 11. 2 field blanks will be collected: one for metals / the other for Ash / Chloride. Metals sample was preserved w/ HNO₃. No field blanks were collected for Volatiles.

NM 1/15/92

At 1115, Field blanks were collected. MM used DI water. MM tagged, bagged and labeled both samples and placed them on ice. A temperature blank was placed in the cooler w/ the samples.

At 1120, MM began packing all of the cassettes and filling out the chain-of-custody forms. All paper work was completed at 1150.

At 1119, MM took a photograph of the field blank sampling location outside of Building 11. Photo shot facing West. Roll 1, Photograph 1b. Note the car was not running during sample collection.

At 1200, MM exited facility and parked back in the visitors parking lot. MM went to the Env. Trailer to find Mr. Gibley and have him sign the CCR and get MSDS sheets on the WLE feed stream sampled today.

MM 1/15/97

MM 1/15/97

At 1230, MM attended close-up meetg
w/ EPA and MDDP. At this time,
Mr. Gibbey signed the COLS and got
MM the PSDs from the WLE waste.

At 1245, MM signed out. At this time, MM
inspected his formaldehyde badge for
exposure. None was found! MM left
the facility.

~~Will McGul~~
~~1/15/97~~

MM 1/15/97

ATTACHMENT A.3

**LANCASTER ANALYTICAL
DATA PACKAGE**

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN, MARYLAND**

**Sample Reference List for SDG # ATK01
with a Package Type of I**

Lab Sample Number	Sample Code	Client Sample Description
-----	-----	-----
2647878	311L1	VE-311-0L-01 Unspiked Grab Liquid Waste Sample
2647879	311I,1	VE-311-0L-01 Matrix Spike Grab Liquid Waste Sample
2647880	311L1	VE-311-0L-01 Matrix Spike Duplicate Grab Liquid
2647881	311L1	VE-311-0L-01 Duplicate Grab Liquid Waste Sample
2647882	311L2	VE-311-0L-02 Grab Liquid Waste Sample
2647883	311FB	VE-311-FB-01 Field Blank Water Sample

QUALITY ASSURANCE SUMMARY

INORGANIC ANALYSIS DATA SHEET FORM I

CLIENT SAMPLE NO.

311L1

Lab Name: LANCASTER LABORATORIES

SDG No.: ATK01

Matrix (soil/water): OIL

Level (low/med): LOW

% Solids: 100.0

Lab Sample ID: 2647878

Date Received: 01/16/97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	4.4	U	N	P
7440-38-2	Arsenic	0.18	U	S	F
7440-39-3	Barium	4.4	U		P
7440-41-7	Beryllium	0.15	U		P
7440-43-9	Cadmium	0.26	U		P
7440-47-3	Chromium	0.93	U		P
7439-92-1	Lead	4.7	U		P
7439-97-6	Mercury	0.028	U		CV
7440-02-0	Nickel	0.91	U		P
7782-49-2	Selenium	0.12	U	S	F
7440-22-4	Silver	0.89	U		P
7440-28-0	Thallium	27.6	U		P

Color Before:
Color After:

Clarity Before:
Clarity After:

Texture:
Artifacts:

Comments:

QUALITY ASSURANCE SUMMARY

INORGANIC ANALYSIS DATA SHEET FORM I

CLIENT SAMPLE NO.

311L1D

Lab Name: LANCASTER LABORATORIES

SDG No.: ATK01

Matrix (soil/water): OIL

Level (low/med): LOW

% Solids: 100.0

Lab Sample ID: 2647881

Date Received: 01/16/97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	4.4	U	N	P
7440-38-2	Arsenic	0.18	U	S	F
7440-39-3	Barium	4.4	U		P
7440-41-7	Beryllium	0.14	U		P
7440-43-9	Cadmium	0.25	U		P
7440-47-3	Chromium	0.92	U		P
7439-92-1	Lead	4.7	U		P
7439-97-6	Mercury	0.028	U		CV
7440-02-0	Nickel	1.4	B		P
7782-49-2	Selenium	0.12	U	S	F
7440-22-4	Silver	0.88	U		P
7440-28-0	Thallium	27.4	U		P

Color Before: _____
Color After: _____

Clarity Before: _____
Clarity After: _____

Texture: _____
Artifacts: _____

Comments:

QUALITY ASSURANCE SUMMARY

INORGANIC ANALYSIS DATA SHEET FORM I

CLIENT SAMPLE NO.

311L1S

Lab Name: LANCASTER LABORATORIES

SDG No.: ATK01

Matrix (soil/water): OIL

Level (low/med): LOW

% Solids: 100.0

Lab Sample ID: 2647879

Date Received: 01/16/97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	437	-	N	P
7440-38-2	Arsenic	3.4	B	S	F
7440-39-3	Barium	136	-	-	P
7440-41-7	Beryllium	327	-	-	P
7440-43-9	Cadmium	124	-	-	P
7440-47-3	Chromium	137	-	-	P
7439-92-1	Lead	121	-	-	P
7439-97-6	Mercury	8.0	-	-	CV
7440-02-0	Nickel	128	-	-	P
7782-49-2	Selenium	1.2	-	S	F
7440-22-4	Silver	116	-	-	P
7440-28-0	Thallium	379	-	-	P

Color Before: _____
Color After: _____

Clarity Before: _____
Clarity After: _____

Texture: _____
Artifacts: _____

Comments:

QUALITY ASSURANCE SUMMARY

INORGANIC ANALYSIS DATA SHEET FORM I

CLIENT SAMPLE NO:

311L1M

Lab Name: LANCASTER LABORATORIES

SDG No.: ATK01

Matrix (soil/water): OIL

Level (low/med): LOW

% Solids: 100.0

Lab Sample ID: 2647880

Date Received: 01/16/97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	479	-	N	P
7440-38-2	Arsenic	3.2	-	S	F
7440-39-3	Barium	129	-		P
7440-41-7	Beryllium	293	-		P
7440-43-9	Cadmium	116	-		P
7440-47-3	Chromium	127	-		P
7439-92-1	Lead	116	-		P
7439-97-6	Mercury	7.8	-		CV
7440-02-0	Nickel	119	-		P
7782-49-2	Selenium	1.0	-	S	F
7440-22-4	Silver	110	-		P
7440-28-0	Thallium	379	-		P

Color Before: _____
Color After: _____

Clarity Before: _____
Clarity After: _____

Texture: _____
Artifacts: _____

Comments:

QUALITY ASSURANCE SUMMARY

INORGANIC ANALYSIS DATA SHEET FORM I

CLIENT SAMPLE NO.

311L2

Lab Name: LANCASTER LABORATORIES

SDG No.: ATK01

Matrix (soil/water): OIL

Level (low/med): LOW

% Solids: 100.0

Lab Sample ID: 2647882

Date Received: 01/16/97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	4.4	U	N	P
7440-38-2	Arsenic	0.18	U	S	F
7440-39-3	Barium	4.4	U		P
7440-41-7	Beryllium	0.15	U		P
7440-43-9	Cadmium	0.26	U		P
7440-47-3	Chromium	1.2	B		P
7439-92-1	Lead	4.8	U		P
7439-97-6	Mercury	0.028	U		CV
7440-02-0	Nickel	0.91	U		P
7782-49-2	Selenium	0.12	U	S	F
7440-22-4	Silver	0.89	U		P
7440-28-0	Thallium	27.8	U		P

Color Before:
Color After:

Clarity Before:
Clarity After:

Texture:
Artifacts:

Comments:

QUALITY ASSURANCE SUMMARY

INORGANIC ANALYSIS DATA SHEET FORM I

CLIENT SAMPLE NO.

311FB

Lab Name: LANCASTER LABORATORIES

SDG No.: ATK01

Matrix (soil/water): WATER

Level (low/med): LOW

% Solids: 0.0

Lab Sample ID: 2647883

Date Received: 01/16/97

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	15.0	U		P
7440-38-2	Arsenic	2.7	U		P
7440-39-3	Barium	2.2	U		P
7440-41-7	Beryllium	1.3	U		P
7440-43-9	Cadmium	2.7	U		P
7440-47-3	Chromium	4.3	U		P
7439-92-1	Lead	18.0	U		P
7439-97-6	Mercury	0.043	U		CV
7440-02-0	Nickel	5.4	U		P
7782-49-2	Selenium	4.0	B		P
7440-22-4	Silver	3.6	U		P
7440-28-0	Thallium	170	U		P

Color Before: _____
Color After: _____

Clarity Before: _____
Clarity After: _____

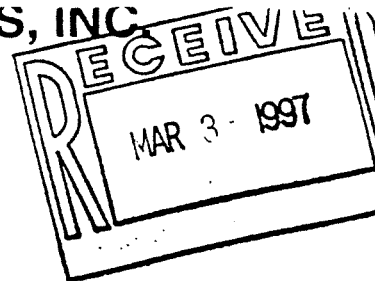
Texture: _____
Artifacts: _____

Comments:



GALBRAITH® LABORATORIES, INC.

Accuracy with speed - since 1950



LABORATORY REPORT

Lynn Hebner
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster PA 17601-5994

Report Date: 02/25/97
Sample Received: 02/05/97
Purchase Order #: 154855

SAMPLE ID	LAB ID	ANALYSIS	RESULTS	METHOD	ANALYST	DET. LIMIT	DATE ANALYZE
2647878 Liquid Waste	S-5437	Ash	315 ppm	D-3174	JW		2-12/13
		Chlorine	<20 ppm	IC	RP/RL	<20 ppm	2/24
2647882 Liquid Waste	S-5438	Ash	694 ppm	D-3174	JW		2-12/13
		Chlorine	<20 ppm	IC	RP/RL	<20 ppm	2/24
2647883 Field Blank Water	S-5439	Ash	<0.02 %	D-3174	JW		2-12/13
		Chlorine	<20 ppm	IC	RP/RL	<20 ppm	2/24
2647895 Liquid Waste Fuel	S-5440	Chlorine	0.85 %	IC	RP/RL	<20 ppm	2/24
2647896 Liquid Waste Fuel	S-5441	Chlorine	0.81 %	IC	RP/RL	<20 ppm	2/24

Page 1 of 2

A.T. Kearney Inc.
215 N. Presidential Blvd.
Bala Cynwyd, PA 19004
610/617-8980

THE KEEPER

Chain of Custody Record

15

[illegible]

ATTACHMENT A.4

MATERIAL SAFETY DATA SHEET

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN, MARYLAND**

UC

MATERIAL SAFETY DATA SHEET

RECORD NO.: M13

=====

US AMERICA INC.	: EMERGENCY (CHEMTREC) -	(800) 424-9300
TURNER PLACE, P.O. BOX 365	: 24 HOUR PHONE -	(201) 763-7173
PISCATAWAY, NJ 08855-0365	: INFORMATION -	(908) 981-5016

=====

SECTION 1. NAME AND PRODUCT

M132

NAME: CHESTERTOWN WASTE FUEL

SYNONYMS:

CAS REG.NO.: NA

FORMULA: Mixture

SECTION 2. HAZARDOUS INGREDIENTS

M132

COMPONENT	ACGIH TLV	OSHA PEL
Toluene [108-88-3] 54% (+)	100 ppm	100 ppm
Methanol [67-56-1] 35% (+)	200 ppm	200 ppm
Isooctyl alcohol [26952-21-6] 1% (typical)	50 ppm	50 ppm
Heptane [142-82-5] 2% (typical)	400 ppm	400 ppm
Isobutanol [78-83-1] 1% (typical)	50 ppm	50 ppm

LEGEND:

- (+) This chemical is subject to the reporting requirements of SARA Title III Section 313 and 40CFR Part 372, and is potentially at the maximum concentration listed.
- (++) SARA Title III Section 302 Extremely Hazardous Substance
- ++ CERCLA Hazardous Substance
- [00000-00-0] Chemical Abstracts Services Registry Number.

If no marks appear with a listed ingredient, then the ingredient is not included in any of the regulatory categories appearing in the Legend of this Material Safety Data Sheet.

SECTION 3. PHYSICAL DATA

M132

APPEARANCE: Dark liquid
(typical)

B.PT. (deg.C/mm): NA

VAPOR PRESSURE (mm/deg.C): NA

M.PT. (deg.C): NA

VAPOR DENSITY (AIR=1): > 1

% SOLUBLE IN WATER: Moderate

SPECIF. GRAVITY: < 1

% VOLATILE BY VOLUME: NA

SECTION 4. FIRE AND EXPLOSION HAZARD.

M132

FLASH POINT: <67F

FLAMMABLE LIMITS (STP IN AIR)

LOWER LIMITS: NA

UPPER LIMITS: NA

FIRE EXTINGUISHING MEDIA: CO2, foam, dry chemical

Water spray or fog

PERSONAL PROTECTION FOR FIGHTING FIRE: Fire fighters must wear positive-pressure, self-contained breathing apparatus and full protective clothing.

SECTION 5. REACTIVITY DATA

M13

STABILITY (UNDER NORMAL CONDITIONS): Stable

Contact with oxidizing agents.

HAZARDOUS POLYMERIZATION: Will not occur
CONDITIONS TO AVOID:

HAZARD RATINGS (Scale 0-4)
HEALTH: 2*

FLAMMABILITY: 3

REACTIVITY: 0

M1321

SECTION 6. SPILL OR LEAK PROCEDURES

IN CASE OF SPILL:

Absorb spilled material with suitable chemical binder.
Do not contaminate soil, groundwater, or surface water.

DISPOSAL METHOD:

Incinerate. Follow all federal, state, and local regulations.

M1321

SECTION 7. HEALTH HAZARD DATA

TOXICITY: Methanol, human: oral LDLo: 340mg/kg; inhalation TCLo: 86000mg/m3
Contains methanol which is toxic by ingestion.

This product may be harmful if inhaled or absorbed through the skin. May contain more than 0.1% Di 2-ethyl hexanoate which may cause cancer according to animal testing.

Inhalation of fumes, skin absorption or ingestion may cause fatigue, weakness, headache and dizziness and may cause kidney, liver and nervous system effects. This hazard evaluation is based on the component hazards, not on specific testing of this product.
See attached approximate material composition.

ROUTES AND EFFECTS OF EXPOSURE:

EYES: Severely irritating.

SKIN: Moderately irritating. May be harmful. Avoid contact.

INHALATION: Moderately irritating. May be harmful. Avoid contact.

INGESTION: Toxic.

FIRST AID PROCEDURES:

EYES: Flush with clean water for at least 15 minutes and consult physician
!!!GET MEDICAL ATTENTION IMMEDIATELY!!!

SKIN: Flush with water

SKIN: Remove contaminated clothing and shoes

INHALATION: Remove victim to fresh air

INHALATION: Give CPR or oxygen if necessary

Reduce vomiting

INGESTION: Get medical attention

---If symptoms persist, get medical attention---

---Never give anything by mouth to an unconscious person---

CARCINOGEN STATUS: NTP?: X IARC MONOGRAPH?: X OSHA REGULATED?: X

=====

SECTION 8. SPECIAL PROTECTION INFORMATION

=====

M13

VENTILATION:

Maintain adequate ventilation
Explosion-proof mechanical ventilation required

RESPIRATORY PROTECTION:

In case of exposure, use appropriate NIOSH approved respiratory protective

PROTECTIVE CLOTHING:

Use impervious gloves
Use impervious clothing as necessary to protect against skin contact

EYE PROTECTION:

Use chemical goggles

=====

SECTION 9. PRECAUTIONS OR OTHER COMMENTS

=====

M13

HANDLING AND STORAGE:

Protect from heat, direct sunlight, and source of ignition
Containers require grounding during use
Maintain tightly closed container
Provide adequate ventilation

DOT INFORMATION:

PROPER SHIPPING NAME: Flammable liquid, poisonous, n.o.s.

TECHNICAL NAME: (Toluene, Methanol)

HAZARD CLASS: 3 ID NO.: UN1992 PACKING GROUP: II ERG: 28

HAZARD LABEL(S): FLAMMABLE LIQUID, POISON

Since empty containers retain product residue, follow hazard precautions even after container is emptied.

=====

NA = No applicable or relevant information available

(R) = Registered Trademark owned by or licensed to Hüls America Inc., Hüls or Hüls Troisdorf A.G.

(TM) = Trademark owned by or licensed to Hüls America Inc., Hüls A.G. or Hüls Troisdorf A.G.

This information is furnished without warranty, representation, inducement, license of any kind, except that it is accurate to the best of Hüls America Inc.'s knowledge or obtained from sources believed by Hüls America Inc. to be accurate and Hüls America Inc. does not assume any legal responsibility for use or reliance upon same. Customers are encouraged to conduct their own tests. Before using any product read its label.

Prepared by E&RA Department

Revision no. 01, 11/11/92

Print date: 11/1

CHESTERTOWN WASTE FUEL

APPROXIMATE MATERIAL COMPOSITION

	<u>Maximum %</u>	<u>Minimum %</u>	<u>Average %</u>
Toluene	54.02	2.79	10.06
2 Ethyl Hexanol	29.59	0.28	4.81
Isodecyl Alcohol	25.97	1.13	3.49
Tridecyl Alcohol	46.04	3.44	4.45
Isobutyl Alcohol	10.16	2.20	1.24
Isooctyl Alcohol	10.16	4.31	1.10
Methanol	34.84	4.61	19.24
Methyl Benzoate	56.85	9.90	20.54
Texanol	56.76	3.07	8.31
Hexanol	14.06	0.00	0.47
Cyclohexanol	7.91	0.00	0.27
Heptane	15.95	0.00	1.79
Strippings	98.55	0.00	18.49
KRD Pumpings	13.61	0.00	0.84
Burnables	10.21	0.71	2.30
1,3 Butylene Glycol	2.79	0.75	0.73
1,4 Butanediol	2.20	0.00	0.26
Propylene Glycol	7.56	0.77	1.24
Neopentyl Glycol	5.50	0.38	0.36

DATE: 11/11/92 REVISION NO.: 01 RECORD NO.: M1321
LABEL INFORMATION FOR CHESTERTOWN WASTE FUEL

CHESTERTOWN WASTE FUEL

CONTAINS:

Toluene [108-88-3] 54% (+)
Methanol [67-56-1] 35% (+)
Isooctyl alcohol [26952-21-6] 1% (typical)
Heptane [142-82-5] 2% (typical)
Isobutanol [78-83-1] 1% (typical)

WARNING!

HARMFUL IF SWALLOWED
CAUSES EYE IRRITATION
FLAMMABLE LIQUID AND VAPOR
MAY CAUSE RESPIRATORY TRACT IRRITATION
MAY CAUSE SKIN IRRITATION

CONTAINS MATERIAL WHICH MAY CAUSE KIDNEY EFFECTS
CONTAINS MATERIAL WHICH MAY CAUSE LIVER EFFECTS
CONTAINS MATERIAL WHICH MAY CAUSE NERVOUS SYSTEM EFFECTS
CONTAINS MATERIAL WHICH MAY CAUSE CANCER BASED ON ANIMAL DATA

Keep away from heat, sparks and flame.
Avoid contact with eyes, skin and clothing.
Avoid breathing vapor or mist.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.

FIRST AID:

If swallowed, induce vomiting immediately if, and as, directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

In case of contact, immediately flush eyes with plenty of water for at least minutes. Remove material from skin and clothing. Get medical attention immediately.

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

In case of contact, flush skin with plenty of water. Remove contaminated clothing. Get medical attention if irritation persists. Wash clothing before reuse.

IN CASE OF FIRE, use water spray or fog, foam, dry chemical or CO2.
IN CASE OF SPILL OR LEAK, absorb with inert material (e.g., dry sand or earthen material). Then place in a chemical waste container. Flush residual spill with water.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

For additional information, read Material Safety Data Sheet.

MIS RATINGS (Scale 0-4): Health: 2* Flammability: 3 Reactivity:

11/11/92

DOT INFORMATION:

PROPER SHIPPING NAME: Flammable liquid, poisonous, n.o.s.
(Methanol)

HAZARD CLASS: 3 ID NO.: UN1992 PACKING GROUP: II ERG: 28
HAZARD LABEL(S): FLAMMABLE LIQUID, POISON

Attachment B

REQUESTED INFORMATION
Velsicol Chemical, Chestertown MD
BIF Compliance Inspection
1/15/97

A. Operating Records

For each of the following dates:

January 6-7, 1996
March 29, 1996
June 12, 1996
September 30, 1996
January 14-15, 1997

1. Provide copies of the following operating data for #1-#3 HO and CB 250 Boiler
 - hazardous waste characterization for regulated constituents
 - hazardous waste feed rate
 - CO emissions (corrected to 7% O₂)
2. Provide copies of the following additional records:
 - automatic waste feed cutoff system testing¹
 - daily BIF inspection log
 - Subpart BB leak detection and repair log sheets¹
 - continuous emission monitor daily system audit log sheets

B. General Facility Records

Provide copies of the following:

- for continuous emission monitors:
 - most recent performance specification test report
 - Last four quarterly calibration error (or relative accuracy) test results

¹ provide a copy of the most recent record prior to the date(s) listed above

August 5, 1997

Trip Report

Kearney/Centaur Division
A.T. Kearney, Inc.
215 North Presidential Boulevard
Bala Cynwyd, Pennsylvania 19004
610 617 8980
Facsimile 610 617 8999

Management
Consultants

August 5, 1997

ATKEARNEY

RZ1-R03002.31-EP-003

Mr. Luis A. Pizarro
Work Assignment Manager
U.S. Environmental Protection Agency
Region III (3HW-100)
841 Chestnut Street
Philadelphia, PA 19107

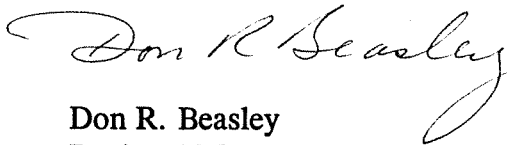
Reference: EPA Contract No. 68-W4-0013; EPA Work Assignment No. R03002.31; BIF
Inspections; Corrected Pages

Dear Mr. Pizarro:

As requested, attached are the corrected pages, double-sided, for the Trip Report for the
Velsicol, Chestertown, MD facility.

Please feel free to contact me or the Work Assignment Manager, Mike McGeehan, at 617/720-
7440, if you have any questions.

Sincerely,



Don R. Beasley
Regional Manager

cc: D. Saunders, EPA RPO
B. Jordan, ATK/Central Files
M. McGeehan, ATK WAM

1.0 INTRODUCTION

At the request of the Environmental Protection Agency (EPA), A.T. Kearney, Inc. provided technical support during an unannounced compliance inspection and conducted sampling activities at the Velsicol Chemical Corporation (Velsicol) facility in Chestertown, Maryland on January 15, 1997. The inspection and sampling events were performed to determine if the four boilers which burn hazardous waste fuel at Velsicol are in compliance with the "Boiler and Industrial Furnace" Rule (40 CFR Part 266, Subpart H).

This Trip Report documents the sampling activities performed by Mr. Michael McGeehan of A.T. Kearney and summarizes the analytical results provided by Lancaster Laboratories (Lancaster). The objectives of this sampling event are discussed in Section 2.0, and a summary of the sampling event is provided in Section 3.0. Analytical results from the sampling activities are presented in Section 4.0. Deficiencies noted, actions taken during the sampling event, and recommendations for further actions are presented in Section 5.0. The Photographic log documenting sampling activities is provided in Attachment A.1, and the Field Log is provided in Attachment A.2. Attachment A.3 contains the analytical results from Lancaster and copies of the chain-of-custody forms used for this sampling event. A material safety data sheet (MSDS) for the hazardous waste sampled is provided in Attachment A.4.

2.0 OBJECTIVES

The primary objective of this sampling event was to provide sampling support to EPA during an unannounced compliance evaluation inspection of the four industrial boilers at Velsicol. A.T. Kearney assisted in collecting information used by EPA to determine whether the boilers at the Velsicol facility are operating in compliance with the Boiler and Industrial Furnace (BIF) Regulations, 40 CFR Part 266, Subpart H.

3.0 SUMMARY OF SAMPLING ACTIVITIES

Sampling activities at Velsicol were conducted by Mr. Michael McGeehan of A.T. Kearney on Wednesday, January 15, 1997. This section provides a brief description of Mr. McGeehan's observations during the sampling event. A complete copy of the Filed Log is provided in Attachment A.2 of this Trip Report.

At 0645, Mr. McGeehan arrived at the A.T. Kearney Philadelphia Project Office in Bala Cynwyd, Pennsylvania to load the van for BIF inspection activities. Mr. McGeehan noted in

closer to the individual boilers, however, due to a previous accident, sampling from the recirculation line was the preferred option.

A faint organic solvent odor was noted inside Building 11 near Tank 324. Mr. McGeehan set up the sampling zones, donned proper PPE and collected a pre-sampling PID reading of 1.5 ppm. Mr. Quinn began bleeding the recirculation line at 1027 into a three-gallon metal bucket. Mr. McGeehan took R₁P₁₃ (previous twelve photographs taken at another facility) facing north of Mr. Quinn bleeding the recirculation line. All photographs were taken with a Minolta Freedom III camera with 24 exposure Kodak 400 ASA film. Mr. Quinn bled the recirculation line twice for a total of approximately five gallons of WLE.

At 1035, Mr. Quinn commenced sample collection of WLE samples (VE-311-OL-01), which are to be analyzed for metals, total chloride, and ash content. The sample containers for total chloride and ash content were collected first; one, one-liter for A.T. Kearney, one, one-liter for Velsicol and extra sample volume for matrix/matrix spike duplicate (MS/MSD) samples for A.T. Kearney. The sample containers for total metals were filled next; one, one-liter for A.T. Kearney, one, one-liter for Velsicol and extra sample volume for MS/MSD samples for A.T. Kearney. Mr. McGeehan took photograph R₁P₁₄ facing north of Mr. Quinn collecting a one-liter WLE sample at the Tank 324 valve.

Mr. Quinn began collecting the WLE field duplicate sample (VE-311-OL-02) for A.T. Kearney at 1045. The one-liter sample container for total chlorides and ash content was filled first, followed by the one-liter sample container for total metals. All of the WLE samples consisted of a light greenish-yellow, single-phase, non-viscous liquid. Duplicate samples were not collected by Velsicol.

After the containers were filled and wiped down by Mr. Quinn, Mr. McGeehan checked each container with the PID monitor to ensure complete decontamination of the containers and placed a sample tag around each lid. Each sample container was then placed into a Ziploc bag and placed inside a cooler. Mr. Quinn was given custody of Velsicol's samples for the Tank 324 location. The PID monitor was equipped with a 5 ppm alarm which did not sound during WLE sampling activities. Prior to leaving this location, Mr. McGeehan took photograph R₁P₁₅ of the recirculation line at 1049.

At 1110, Mr. McGeehan proceeded to the van parked outside of the Building 11 laboratory to prepare WLE samples for shipment and collection of the field blanks. At 1115, Mr. McGeehan donned nitrile gloves and began collecting the field blank samples (VE-311-FB-01) for A.T. Kearney at the van, parked outside of the Building 11 laboratory. The one-liter sample container for total chlorides analysis was filled first with de-ionized water provided by Lancaster. This sample was not preserved. Next, the one-liter sample container, pre-

October 16, 1997

Correspondence Regarding Compliance Evaluation Inspection



Page 1 of 2

October 16, 1997

United States Environmental Protection Agency
Region III
841 Chestnut Building
Philadelphia, PA 19107-4431
Attn: Paul Gotthold

Re: Velsicol Chemical Corporation Compliance Evaluation Inspection of Boiler and Industrial Furnace (BIF) units on January 15, 1997

Dear Mr. Gotthold:

This letter is in response to your Compliance Evaluation Inspection Report pertaining to your January 15, 1997 inspection, which the facility received in September of 1997.

There were three issues identified in the report. The first involved the facility missing a weekly Automatic Waste Feed Cut Off (AWFCO) test during the period of 9/18/96 to 9/30/96. In response to this issue, the facility has developed a written procedure for shutting down and restarting the boilers and hot oil units. This procedure is included in all department operating procedure manuals in addition to our BIF operating manual. The procedure specifies that before an operator restarts a boiler or hot oil unit, he/she will verify that a weekly AWFCO test was performed. If the test was not performed, the operator will contact a utility operator to do the test and will not burn hazardous waste in the unit until the test is completed. This procedure was reviewed with all facility operators.

The second issue in the Evaluation Inspection involved the documentation of daily calibration checks of the Continuous Emission Monitoring (CEM) units. Our system is configured such that these daily calibrations are completed automatically. When the calibration is successful, the time is recorded and the units continue to operate. If a calibration is unsuccessful, the unit is interlocked for automatic shut down. The system does not allow for the actual values obtained during the calibration to be recorded. According to the individuals who configured our CEM system, it is not possible for the system to record the calibration values, but merely the success or failure of the calibration. In my conversation with Mr. Luis Pizarro, he stated that if the actual calibration values cannot be recorded automatically, instead of performing the calibrations

Page 2 of 2

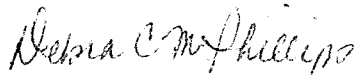
manually, he would prefer that we maintain the current CEM system operation and record the calibration gas concentrations. We currently record the calibration gas values daily and document when cylinders are replaced. It is my understanding that this will be sufficient for documentation purposes.

The final issue involved the storage of liquid hazardous waste. MDE requires that liquid hazardous waste be stored in an area in which containment prevents run-on. This issue was addressed during the inspection. Containers of liquid hazardous waste are stored on containment platforms which prevent run-on. This practice was put in place during the audit and remains in effect.

All issues raised during the audit have been addressed.

If you have any questions or need additional information, please do not hesitate to call me at (410) 778-1991 x248.

Sincerely yours,



Debra C. M. Phillips
Environment, Health, and Safety Administrator

cc:
Luis Pizarro, USEPA Region III

Eugene DeJoise, MDE

Pat Kitchens, Corporate EHS

John Sisson
Robert Bishop
Larry Legg
Donald Quinn
Gary Schaubert



July 22, 1999

RCRA Compliance Evaluation Inspection Report/LDR Inspection

RCRA Compliance Evaluation/Land Disposal Restrictions Inspection

Velsicol Chemical Corporation
10380 Worton Road
Chestertown, Maryland 21620

(410) 778-1991

EPA I.D. No: MDD001890060

Date of Inspection: July 22, 1999

EPA Representative:

Gerard Crutchley
Environmental Protection
Specialist, EPA, Region III

Facility Representative:

Debra C. M. Phillips
Environmental Health & Safety Manager

Background

EPA, Region III's Facility Inspection Program received a request from Region III's Waste & Chemical Management Division to conduct a RCRA Compliance Evaluation/Land Disposal Restrictions Inspection at the Velsicol Chemical Corporation (MDD001890060) located in Chestertown, Maryland. The inspection request included some information from the RCRIS data base concerning the facility's compliance history. Prior to the subject inspection, the EPA inspector contacted the Maryland Department of the Environment to inform them of the upcoming inspection. The EPA inspector spoke with Mr. Eugene DeJoise, Maryland State hazardous waste inspector. Mr. DeJoise stated that he would not be able to accompany EPA during the inspection; however, he would forward a copy of the inspection report from the most recent full compliance inspection conducted by the State of Maryland. The last full compliance inspection was conducted in November, 1993 and the inspection report contained completed inspection checklists and a written narrative. Most of this report was hand written and it was difficult to read the report, consequently the EPA inspector was unable to determine if there were any significant findings from the State inspection (See Attachment No. 10).

Inspection Findings

The EPA representative, Gerard Crutchley arrived at the subject facility on July 22, 1999 and announced the inspection to Ms. Debra Phillips, Environmental Health & Safety Manager. The EPA inspector explained the purpose of the inspection to Ms. Phillips and then requested that Ms. Phillips provide an overview of the facility operations including the types of waste generated by the facility's processes.

The facility manufactures phthalate esters which are used in the manufacturing of plasticizers. At the end of 1994, Huls America sold the company to Velsicol which is a privately owned company based in Chicago. The facility did at one time also manufacture synthetic lubricants but in 1998, the company divested and that part of the business was sold. The facility consists of approximately 15 acres and employs 48 people.

During the production of the phthalate esters, waste light ends are pulled off during the reaction process. This material, a D001 hazardous waste, is accumulated in one of two bulk storage tanks. According to analytical data provided by the facility this material is approximately 30% toluene (See Attachment No. 3). The material is then burned on site in the facility's BIF units (3 hot oil units & one steam unit). Ms. Phillips stated that they empty one tank per month which is burned in their BIF units. The facility did apply for Part A interim status in 1992/1993. Ms. Phillips also said that the BIF units had just recently went through re-certification for their emission monitoring systems (CEMs).

Other waste streams generated by the facility consist of various solvents (D001, F003, & F005), and phthalic anhydride (U190). The facility does on occasion generate a lab pack from their on-site laboratory which could contain any number of waste chemicals. The last lab pack generated by the facility was in July, 1997 (See Attachment No. 4)

Aside from the D001 waste that is burned in the facility's BIF units, the largest waste stream by volume is a filter cake sludge from the facility's main process and chemical sludge from the facility's API separators. This material is not a listed waste under EPA regulations, but the State of Maryland has designated this waste stream as a listed hazardous waste from a specific source. The State has designated the material as *MD01 - filter cake and chemical sludge from API separators, generated during the production of phthalate esters*. According to Ms. Phillips, she believes that the material was analyzed by the facility sometime in the past, but the analytical results could not be located.

On August 13, 1999, the EPA inspector returned to the subject facility to collect samples of the material in question (filter cake and chemical sludge) to determine if this material exhibited any of the characteristics of a hazardous waste as defined in 40 CFR Part 261. The samples were collected and delivered to the EPA laboratory at Fort Meade on August 13, 1999. The analytical results from these samples will be forwarded to the RCRA Hazardous Waste program when they are completed.

The facility does periodically generate other waste materials (hazardous and non-hazardous) as a result of cleanups, small spills and tank cleanouts.

The facility representative, Ms. Phillips, maintains a running log of all wastes (hazardous and non-hazardous) generated by the facility during the calendar year. This log is maintained as a data base in their computer system. The EPA inspector obtained copies of the log for 1998 and 1999 (See Attachment No. 1).

The facility also has an on-site wastewater treatment plant.

During the subject inspection, the EPA inspector accompanied Ms. Phillips toured several areas at the facility to observe where hazardous wastes are generated, accumulated or otherwise managed.

Outside and adjacent to the production building is a large concrete pad containing a 30 yard roll-off container (See Photo No. 1). This container is used for accumulating the filter cake generated during the production of the phthalate esters. The pad is bermed on both sides and one end. The front of the pad is open, but it is sloped toward the back of the pad. There is a drain in the middle of the pad (See Photo No. 2) and according to Ms. Phillips, the drain is normally closed. This drain is valved so its flow can be directed to either a surface discharge or to the facility's wastewater treatment facility. If rainwater collects on the pad the drain is opened and the flow is directed to the surface discharge. If any other material collects on the pad, the drain is opened to direct the flow to the facility's treatment plant. A sign posted in front of the pad contains the following "Caution Hazardous Waste and unauthorized personnel keep out". The metal roll-off container is marked with a hazardous waste label which contains the following information: phthalate ester, UN3077, Velsicol Chemical. There was no accumulation start date marked on the label or on the roll-off container. The container was approximately 2/3 full at the time of the inspection and according to Ms. Phillips, they considered this to be a satellite accumulation area. It was also noted that although the roll-off has a cover, the cover was raised

above the roll-off at the time of the inspection (See Photo No. 3) and no waste was being added to the container at that time. Ms. Phillips said that they ship off site one full roll-off every five to six weeks.

Located adjacent to the roll-off container is a second concrete pad which, according to Ms. Phillips, is the facility's less than 90 day accumulation area (See Photo Nos. 6, 7 & 8). This pad is used for accumulating both hazardous and non-hazardous materials. The concrete pad is bermed on both sides and on one end. The front of the pad is open, but it is sloped toward the back of the pad to contain any spilled or leaked material. A drain is located in the middle of the pad and, according to Ms. Phillips, the drain is normally closed. The drain is connected to a sump (See Photo No. 5) located behind the storage pad and any flow from this sump, can either be directed to a surface discharge or to the facility's wastewater treatment plant via a manually controlled valve (See Photo No. 4). At the time of the inspection, there was approximately one inch of what appeared to be rainwater accumulated on the pad. According to Ms. Phillips personnel in the production department routinely check the storage pad for accumulation of any stormwater or other material. If stormwater is observed, they will open the valve and allow the stormwater to flow into the sump from where it is then pumped to a surface discharge. If any other material is identified, the material is directed to the facility's treatment plant.

A sign is posted in front of the pad to indicate the storage of hazardous waste. At the time of the inspection there were approximately fifty-six drums stored on the pad. All of the drums were stored on wooden pallets. Seven of the drums were marked as containing hazardous waste. Following is the information contained on the hazardous waste labels:

3 - 55 gallon drums, marked as containing Monomer 081, D001. All three drums were marked with an accumulation start date of 5/6/99.

1 - 55 gallon drum, marked as containing WLE (waste light ends)/#6 fuel, solvents. The drum was marked with an accumulation start date of 7/21/99.

2 - 55 gallon drums, marked as containing phthalic anhydride. One drum was marked with an accumulation start date of 5/17/99 and the other was marked 5/26/99.

1 - 55 gallon drum, marked as containing WLE/ #6 fuel, solvents. The drum was marked with an accumulation start date of 6/2/99.

All of the drums were closed and no leaks were observed on or near any of the drums. It was noted that the hazardous waste labels on some of the drums were starting to peel off and some of the writing on the labels had faded (See Photo Nos. 9 & 10). The EPA inspector recommended to Ms. Phillips that they should obtain some standard hazardous waste labels for marking their containers and the information recorded on the labels should be done with a permanent marker.

Ms. Phillips said that this area is inspected once per week by production/maintenance personnel and that she maintains all of the inspection records.

The facility's production building contains three 60,000 gallon reactors. The production of the phthalate esters is a batch process which involves charging the reactors with the raw materials. The materials are heated and reactors are pressurized to produce the phthalate esters. During this process is when the WLE (waste light ends, D001) are pulled off to be burned in the facility's BIF units. The phthalate esters are filtered as part of the process and the filter cake removed at this point is the MD01 waste. The filter cake is collected in a small metal hopper (See Photo No. 11) and then emptied into the roll-off container. The frequency at which the metal hopper is emptied into the roll-off varies according to production. At the time of the inspection, the metal hopper was partially filled with the filter cake material and some other paper filter material which Ms. Phillips said is non-hazardous, but it is accumulated in the roll-off with the MD01 waste. The metal hopper is not marked with any labels to indicate the type of material accumulating in the hopper.

In the facility's boiler room, the EPA inspector observed one 55 gallon drum in a satellite accumulation area. The drum was marked as containing waste light ends/#6 fuel/solvents. The drum was fitted with a closed funnel for adding waste to the drum. The drum was only partially filled at the time of the inspection. A drain is located in the floor adjacent to the drum which, according to facility personnel is connected to the facility's wastewater treatment plant. There were no leaks observed on or near the drum.

There are a number of old lagoons at the site which originally were used as the facility's wastewater treatment process (See Photo Nos. 12, 13 & 14). These lagoons have been empty for over 1 1/2 years. According to Ms. Phillips, the State of Maryland is requiring remediation of the lagoons; however, as part of the sales contract when Huls America sold the facility to Velsicol, Huls America agreed to perform the remediation. Ms. Phillips said that currently Velsicol is trying to get Huls America to expedite the remediation and in exchange, Velsicol will relieve Huls America of any future requirements regarding the lagoons.

While touring the lagoon area, the EPA inspector observed a trailer which contained a 55 gallon drum that was marked as containing asbestos. The drum was closed and it appeared to be empty. Ms. Phillips said that the facility had recently reworked the reactor units which included removal of asbestos materials, but all of that material had already been shipped off-site for disposal.

Adjacent to the phthalate anhydride storage tank, the EPA inspector observed a 55 gallon drum in a satellite accumulation area (See Photo No. 15). The area was marked with a sign and the drum was marked with a hazardous waste label. The drum was partially filled at the time of the inspection and no leaks were observed on or near the drum.

A tank pad located near the facility's primary wastewater treatment area contains two tanks which are used to accumulate the waste light ends (D001 waste) that are burned in the facility's BIF units (See Photo Nos. 16 & 17). Each of the tanks is marked as containing hazardous waste. The tanks are located in a contained area which appeared to be in good condition. A drainage sump inside the contained area is equipped to pump accumulated

stormwater to a surface discharge or to pump waste material to the facility's treatment plant. A pipe extending from the top of one of the storage tanks is connected to two 55 gallon drums containing carbon which is used for odor control (See Photo No. 18).

At the rail car unloading area across from the tank pad, the EPA inspector observed a 55 gallon drum (See Photo No. 19). The area is marked with a sign identifying it as a satellite accumulation area. The drum was marked with a hazardous waste label, but the label was beginning to peel off of the drum. The drum was closed and no leaks were observed on or near the drum.

The facility's primary treatment plant area has two API separators (See Photo No. 20). Approximately every three to four months the sludge is cleaned from the separators by means of a vacuum truck and immediately hauled off site for disposal. This waste is identified as MD01 waste. According to Ms. Phillips each load is approximately 50,000 pounds.

In the facility's analytical laboratory, the EPA inspector observed one 55 gallon drum which is used to accumulate waste solvents (See Photo No. 21). The area is designated as a satellite accumulation area. The drum was marked with a hazardous waste label and it was fitted with a closed funnel. No leaks were observed on or near the drum.

Following the tour of the facility, the EPA inspector returned to Ms. Phillips office to review all records related to the facility's hazardous waste management program.

The EPA inspector reviewed facility waste shipment manifests for 1997, 1998 and 1999. The only discrepancy noted regarding the manifests was that for one shipment of hazardous waste (F003, F005, & D001) manifest no. 0760062, shipment date 12/10/98, the facility had not yet received a signed copy of the manifest from the TSD facility and they had not submitted an exception report regarding this matter.

Examples of the facility's completed manifests and associated LDR paperwork are provided as attachments to this report (See Attachment Nos. 4 to 8).

The EPA inspector also reviewed the facility's contingency plan, inspection records, personnel training records as well as records associated with the burning of the D001 waste in the facility's BIF units (See Attachment No. 2). The results of the record review are documented in the attached inspection checklists (Generator & Land Disposal checklists).

Subpart CC (air emissions from containers tanks and surface impoundments)

The EPA inspector questioned Ms. Phillips about Subpart CC regulations and how they affected the facility's waste streams. Ms. Phillips said that they had made a determination on the D001 waste stream which is burned in the facility's BIF units. The determination was based on calculations (See Attachment No. 9) using the maximum vapor pressure of toluene (major component of the D001 waste). Based on these calculations, it appears that the facility would only need Level I tank controls (fixed roof) for the two tanks containing the D001 waste. Both

of these tanks, T-324 & T-325, are fixed roof tanks with no visible vents or other openings. These two tanks are connected by hard piping to two 55 gallon drums containing carbon which are used for odor control.

According to Ms. Phillips, the facility has not made determinations on any of their drummed waste; however, the drums are not in "light material service", and the drums are not used for waste stabilization, therefore the facility would only be required to have Level I controls which requires a drum/container with a cover and closure devices for each opening. Based on the observations made during the tour of the facility's drum accumulation area, it appears that all of the facility's drums meet the Level I requirements. The EPA inspector did complete an inspection checklist for Subpart CC requirements which is attached to this report.

Summary of Findings

On July 22, 1999, a representative from EPA Region III's Facility Inspection Program conducted a RCRA Compliance Evaluation/Land Disposal Restrictions Inspection at the Velsicol Chemical Corporation located in Chestertown, Maryland. The inspection focused on the facility's hazardous waste management system including what types of waste are generated and how they are managed at the facility. The facility does operate four BIF units (3 hot oil & one steam boiler) which burn waste light ends (D001 waste) generated during the production process. This inspection did not include a detailed inspection of these units (BIF inspection). Following are the discrepancies noted during the subject inspection:

1. The facility did not have a signed copy of the manifest from the TSD facility for a shipment of hazardous waste on 12/10/98 (manifest no. 0760062) and the facility had not submitted an exception report to the Maryland Department of the Environment (MDE) for not having received a signed copy of the manifest within 30 days of acceptance by the initial transporter. COMAR 26.13.03.06.C. (2)
2. A 30 yard roll-off container accumulating hazardous waste (MDE listed waste - MD01) was not marked with an accumulation start date at the time of the inspection. COMAR 26.13.03.05.E (1) (c) **
3. The 30 yard roll-off container accumulating MDE listed waste (MD01) has a cover, but it was not lowered onto the container at the time of the inspection and no waste was being added to the container at that time. COMAR 26.13.05.09.D. There were a number of entries on the facility's weekly inspection logs which indicated the same situation. **
4. A metal hopper inside the production building collects the filter cake (MD01 waste) which is accumulated in the 30 yard roll-off container. The frequency at which the contents of the hopper are emptied into the roll-off varies according to production rates, but according to the facility representative it is usually no longer than a one day period. The metal hopper is larger than 55 gallons in size. The metal hopper is not marked with any labels or other markings to indicate the contents of the hopper. **
5. All of the containers (55 gallon drums) accumulating waste in both the <90 day accumulation area and the satellite accumulation areas are marked with hazardous waste labels; however, the labels on several containers were starting to peel off and some of the writing on the labels had begun to fade. The EPA representative recommended to facility personnel that they replace these labels with a standard hazardous waste label.

** The waste which is accumulated in metal hopper and the 30 yard roll-off is a listed waste in MDE's hazardous waste regulations. The State has designated the material as *MD01 - filter cake and chemical sludge from API separators, generated during the production of phthalate esters.*

On August 13, 1999, the EPA inspector returned to the facility and collected two samples of the material in question to determine if this material exhibited any of the characteristics of a hazardous waste. The samples were delivered to the EPA laboratory at Fort Meade and the analytical results from the two samples will be forwarded to the RCRA program when they are completed.

August 31, 1999

Report of Observations

STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
WASTE MANAGEMENT ADMINISTRATION
2500 BROENING HIGHWAY, BALTIMORE, MARYLAND 21224

Type of Inspection/Observations: Boiler Industrial Furnace (BIF)

Facility/Identifier: Velsicol Chemical Corporation

Date: 08/31/99

Inspector: Eugene DeJoise *Facility Representative(s):* Debra Phillips

REPORT OF OBSERVATIONS

PURPOSE

I conducted this inspection in order to determine this facility's compliance with the Federal BIF requirements as detailed within 40 CFR Part 266.103 through 266.107. There are no exclusions, as detailed within 266.108 through 266.110, and the requirements of 266.111 do not apply, as all hazardous waste fuels are managed within storage units prior to use and are not directly transferred from any vehicle. Additionally, in accordance with the requirements detailed within 266.103 (d), Velsicol has submitted a Recertification of Compliance to the USEPA. The document was submitted on 10/22/98, as described within the document cover letter. In an effort to determine if operating conditions are maintained in conformance with the parameters set for within the recertification document, I reviewed the relevant records maintained for the operation of the BIF units.

FACILITY DESCRIPTION

Velsicol formulates an assortment of components, including various phthalate ester and phthalate anhydride compounds. These compounds are employed in the manufacture of various synthetic plasticizer and lubricant products. Velsicol maintains four combustion units consisting of three hot oil system boilers and a Cleaver Brooks boiler. Usage of the three hot oil system boilers provides the heat energy needed for the chemical manufacturing operations. The Cleaver Brooks boiler is dedicated primarily for facility heating. Hazardous waste fuels, designated as "waste light ends" (WLE) and consisting primarily of waste toluene, and number 6 fuel oils are utilized as fuel sources for the operation of the boiler units. According to the Recertification document, "there is no capability for co-firing WLE and fuel oil."

FACILITY INSPECTION

The facility EHS Manager, Debra Phillips, accompanied me during the time of this

**Maryland Department of the Environment
Waste Management Administration
Hazardous Waste Enforcement Division**

**Compliance Evaluation Inspection
Boiler Industrial Furnace
Velsicol
10380 Worton Road, Chestertown Maryland 21620
EPA Identification # MDD001890060**

**Inspection Participants
MDE: *Eugene DeJoise, HWED Inspector*
Velsicol: *Debra Phillips, EHS Manager***

- Contents**
- 1) Inspection Report of Observations**
 - 2) Chart - CO Emissions**
 - 3) Chart - Unit Comparison, Co Emissions**
 - 4) Chart - Daily Comparison, Co Emissions**

inspection; during which time I observed operation of the Continuous Emission Monitor (CEM) located in the BIF control room, inspected the boiler units and examined the various hazardous waste storage areas, including all areas of secondary containment and satellite accumulation.

The CEM is utilized to compute the one-minute averages of carbon monoxide (CO) emissions, generated during the utilization of the boiler units. The CO concentrations present within the stack emissions are recorded on Process Data Reports. These reports are processed and hourly rolling averages are computed. The designed cut off point for CO, during which boiler operations are discontinued, is 50 ppm. The regulatory limitation for system cut off is 100 ppm. During my inspection of the monitors, I observed the following measurements 1) #3 Hot oil - 15.3 % oxygen, 1.4 ppm CO 2) #2 Hot oil - calibrating 3) #1 Hot oil - 21.3% oxygen, 2.8 ppm CO 4) Cleaver Brooks - 9.58% oxygen, 5.6 ppm CO. All CO concentrations are subsequently corrected to 7% oxygen (40 CFR Part 266.104).

Velsicol maintains two 90 day storage areas from which hazardous wastes are stored prior to the off-site shipment of the wastes. Within one of these areas, Velsicol stores wastes within 55-gallon drums. Both hazardous and non hazardous wastes are maintained within this area. I observed fifty 55-gallon drums stored at this location, two of which contained hazardous wastes consisting of mixed solvents (D001/F003/F005) and waste light ends (D001/F003/F005). Both drums have been in storage for less than 90 days and are maintained in accordance with the Pretransportation Requirements described at COMAR 26.13.03.03 E(1). The remaining drums contained an assortment of nonhazardous wastes, generated primarily from operations in which hazardous constituents are not utilized. The drum storage area is maintained in accordance with the Containment requirements described at COMAR 26.13.05.09. The secondary containment capacity, consisting of a continuous concrete foundation and curbing, is 972.2 gallons. Based upon COMAR (26.13.05.09) requirements, a minimum of 275 gallons of containment capacity is required for the volume of waste, both hazardous and nonhazardous, observed to be in storage at the time of this inspection. Velsicol maintains three areas, in which hazardous wastes are generated and stored prior to removal and storage of the wastes at the drum storage area. The first satellite accumulation area is maintained adjacent to the location from which phthalate anhydride is unloaded from railroad cars. These wastes, consisting of unusable residuals of the anhydride, are discharged directly to a 55-gallon drum. I observed the drum to be maintained in accordance with the requirements of Satellite Accumulation, as detailed within COMAR 26.13.03.05 E(3). A phthalate anhydride dust residue is generated during the cool down phase of an operation in which the anhydride is processed in a molten state. Within the process area, I observed the second satellite accumulation area. Within this area, I observed that one 55-gallon drum containing the dust residue was managed in accordance with the satellite accumulation requirements. Velsicol generates hazardous wastes, consisting of WLE, during maintenance of the boiler units' ancillary equipment. Within the third satellite accumulation area, I observed that one 55-gallon drum, set aside for the accumulation of the WLE waste, was managed in accordance with the above referenced satellite accumulation requirements.

Velsicol maintains a 20-cubic yard roll-off container within the second 90-day storage area. The containment area is constructed (concrete foundation) in accordance with the applicable requirements pertaining to secondary containment, as described at COMAR 26.13.05.09.

Hazardous wastes stored within the roll-off consist of filter cake residues (MD01), generated during the manufacture of phthalate esters (API separator sludge). The initial date of accumulation for the wastes stored within the roll-off was identified (marked on roll-off) as 08/03/99.

The WLE hazardous waste fuel is maintained within two above ground storage tanks (T-324 & T-334) capacities of 12,000 and 16,300 gallons. Prior to burning with the BIF units, all WLE fuel is accumulated and then stored within these tanks. The tanks are maintained in accordance with the applicable the requirements of COMAR 26.13.05.10 (Hazardous Waste Management in Tank Systems). During my inspection of the tank farm area, I observed no apparent problems associated with the storage of the waste fuel. Velsicol maintains two 55-gallon drums containing carbon canisters. In an effort to reduce potential air emissions, the vapors generated within the headspace of each tank are removed and directed through the canisters and the carbon absorbers. Velsicol has provided 18,066 gallons of secondary containment capacity, consisting of a continuous concrete foundation and curbing, for the WLE fuel, exceeding the 2,830 gallons of capacity that is required.

RECORD KEEPING

In accordance with 40 CFR Part 266.103 (a)(4), Velsicol must conform with all requirements pertaining to preparedness and prevention and emergency procedures (Contingency Plan), as detailed within COMAR 26.13.05.03 and 26.13.05.04, respectively. As a generator of hazardous waste, Velsicol must provide personnel training in accordance with the requirements outlined at COMAR 26.13.05.02 G.

Velsicol has prepared an **Emergency Response and Contingency Plan** for all emergencies. Contingencies for medical, fire and explosion, chemical and severe weather emergencies are detailed. Velsicol has provided adequate notification procedures, pre emergency planning and training for the handling of these emergencies. Within the section pertaining to chemical releases, Velsicol has outlined emergency procedures pertaining to releases of hazardous wastes. Evacuation procedures are outlined within the Emergency Procedure section of the plan. Based upon information contained within the plan, Velsicol has conformed with the requirements regarding Preparedness and Prevention and the Contingency Plan.

Velsicol provides Personnel Training for all employees involved in the handling of hazardous wastes. Training topics include general information regarding hazardous wastes, pollution prevention guidelines, types of hazardous waste generators, hazardous waste accumulation, satellite accumulation, hazardous waste transportation, waste disposal costs and information pertaining to the operation of the BIF units. Velsicol provides the hazardous waste refresher training on an annual basis. All employees that received refresher training, provided on 04/08/99, completed the "Training Certification Test."

In accordance with the requirements specified within 40 CFR Part 266.103 (d), Velsicol has chronicled the Recertification of Compliance. Velsicol has utilized "site-specific dispersion modeling" to determine the Adjusted Tier 1 Feed Rate and Emissions Screening Limits for the

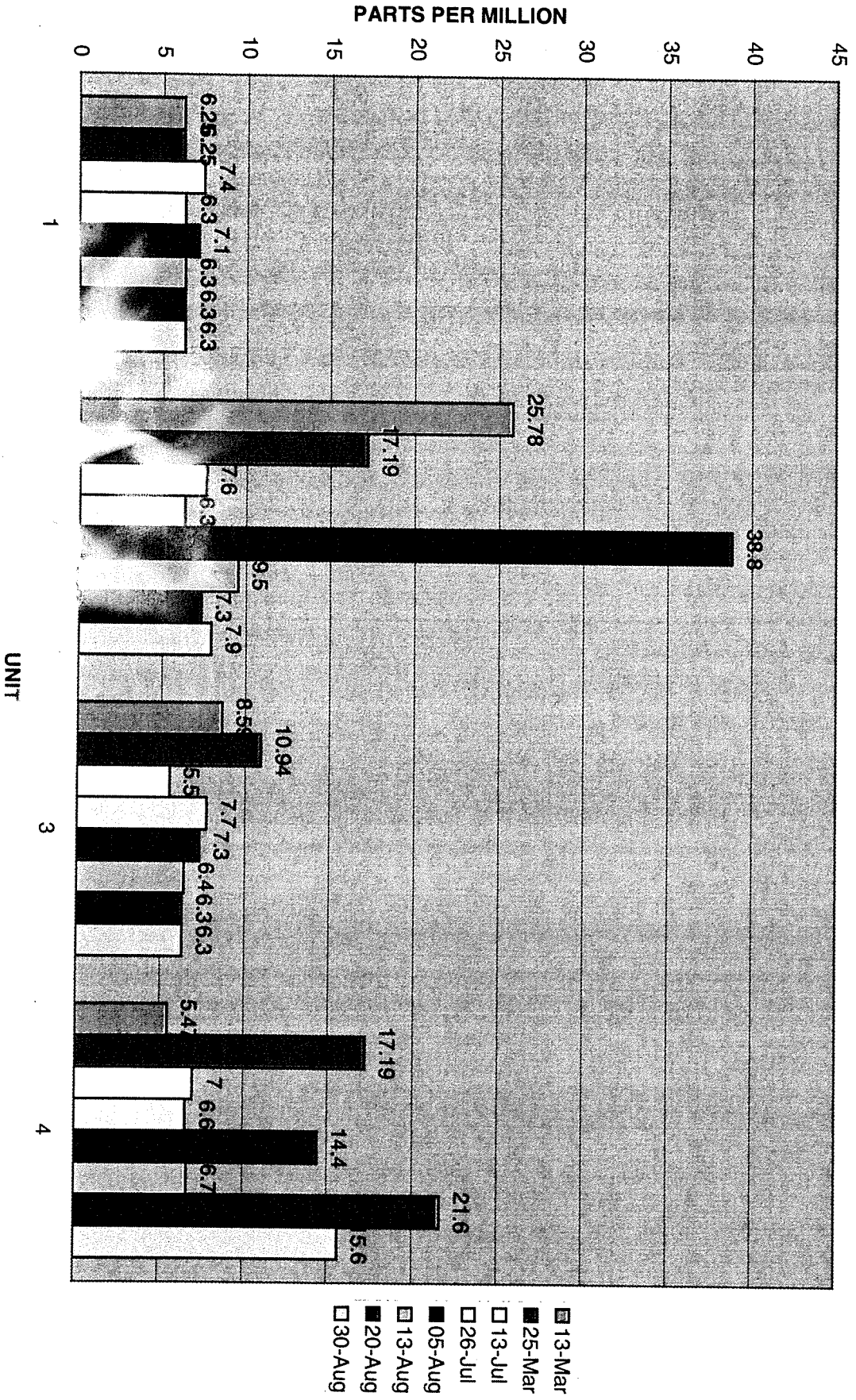
BIF metals and chlorine (organic halogens). Velsicol analyzes the WLE fuel monthly for the presence of these constituents. Based upon the known fuel feed rate (gallons per hour) and the constituent concentrations, Velsicol determines the feed rate for each constituent in grams per hour. In order to determine if the BIF emissions are in compliance with the limitations documented within the Recertification of Compliance, the feed rate for each constituent is compared with the applicable adjusted Tier 1 limitation. As documented within 40 CFR Part 266.104 (b), the carbon monoxide emission concentration cannot exceed 100 ppm (corrected to 7% oxygen) on an hourly rolling average basis. Accordingly, Velsicol has set the waste feed shut off point for each BIF unit at 50 ppm CO. As documented within 40 CFR Part 266.105, particulate matter present within the BIF emissions cannot exceed .08 grains per dry standard cubic foot. Based upon the dispersion modeling described within the recertification document, Velsicol has established ash feed rates in grams per hour. The actual feed rates are determined only when the concentration of ash is greater than or equal to .15%. Velsicol has discovered that when concentrations of ash are .15% or less, the feed rate in grams per hour is below the adjusted maximum feed rate specified for each BIF unit.

Velsicol summarizes all BIF Feed Rate Calculations on facility form #174 DHS - Daily BIF report. Information pertaining to the maximum hourly rolling average for CO (ppm) for each 24-hour period (calculated for each BIF unit) and the constituent feed rate calculations for the remaining constituents are summarized on each report. I reviewed daily reports documented for 03/02/99, 03/13/99, 03/25/99, 07/14/99, 07/26/99, 08/05/99, 08/13/99, 08/20/99 and 08/30/99. During operation of the BIF units on those dates, Velsicol did not exceed any parameter limitation, including the maximum constituent feed rates (grams per hour) documented within the Recertification of Compliance and the concentration limitations for CO and particulate matter documented within 40 CFR Part 266.

Velsicol performs daily inspections of all BIF units, including each boiler unit and waste storage tank. Observations made during each daily inspection are documented on a Daily Inspection Log. For each boiler unit, Velsicol inspects the pump, all valves and piping, the waste feed totalizing indicator and the flue gas monitor.

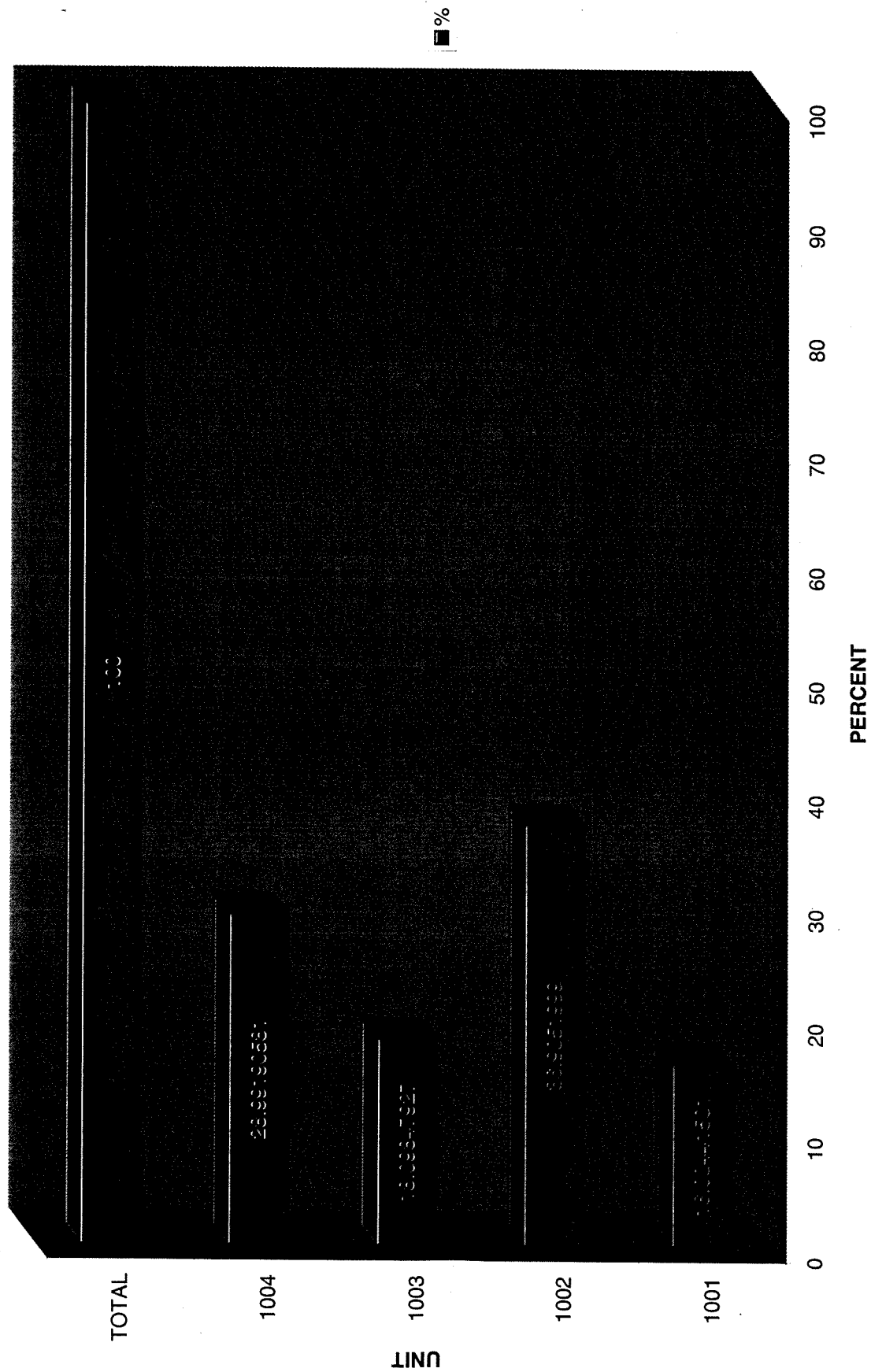
As described above, Velsicol maintains carbon absorption canisters that are utilized to reduce WLE storage tank emissions. Velsicol performs periodic analyses of the spent carbon. Based upon process knowledge and the results of the analyses (Characteristic of Ignitability), Velsicol handles the spent carbon as non hazardous waste.

CO EMISSIONS



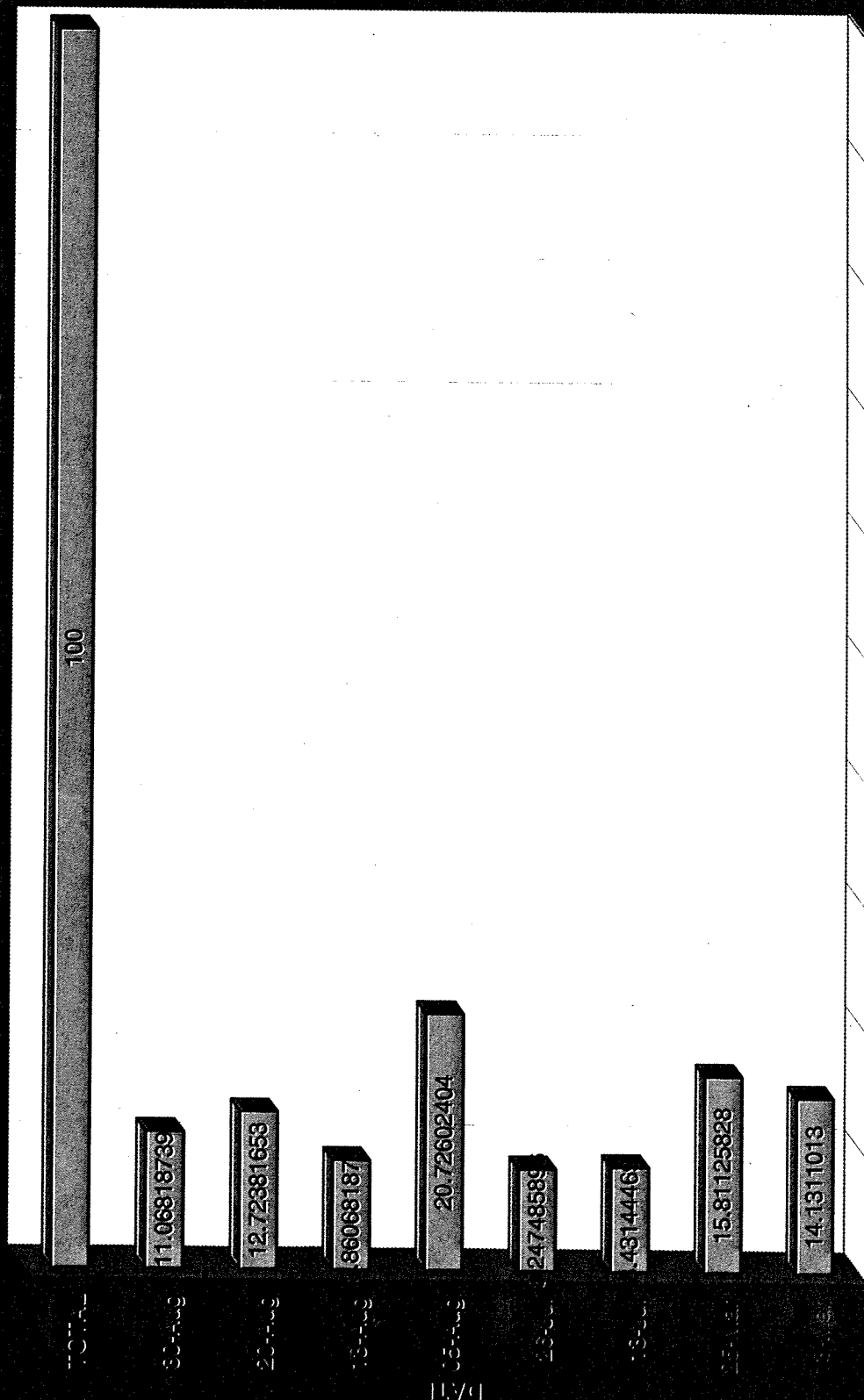
CO Emissions

UNIT COMPARISON



CO EMISSIONS

DAILY COMPARISON



January 19, 2001

Correspondence Requesting Part B Permit Application



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

JAN 19 2001

Mr. Scott A. Zurich, Plant Manager
Velsicol Chemical Corporation
10380 Worton Rd
Chestertown, MD 21620

Dear Mr. Zurich:

This letter constitutes a formal request for Part B of the hazardous waste management permit application for Velsicol Chemical Corporation (EPA ID No. MDD 00 189 0060). This request is made pursuant to authority granted under the Resource Conservation and Recovery Act (RCRA) and regulations set forth in 40 CFR Part 270.

This request is applicable to all equipment that is currently operating under RCRA interim status. This may include, but is not limited to, boilers and industrial furnaces burning hazardous waste (40 CFR 266.100 et seq.), miscellaneous equipment contacting hazardous wastes containing greater than 10% by weight organic constituents (40 CFR 264.1050 et seq.), and tanks or containers used to store hazardous waste (air emission standards only, 40 CFR 264.1080 et seq.).

Requirements of the Part B application are set forth in 40 CFR 270.14 through 270.27, as applicable. In addition to these regulatory requirements, EPA has a statutory obligation (codified at 40 CFR 270.32(b)(2)) to ensure that all permits are protective of human health and the environment. In order for EPA to make that assessment, you are also required, pursuant to 40 CFR 270.10(k), to submit an evaluation of risks associated with air emissions from your facility's hazardous waste management operations. Please contact the EPA permit writer identified below early in the development of your application, to discuss the scope and nature of your risk evaluation.

The full Part B application, including a trial burn plan and risk assessment plan, shall be submitted within six months after your receipt of this letter. Failure to furnish a requested Part B application on time, or to furnish in full the information required, is grounds for termination of interim status.

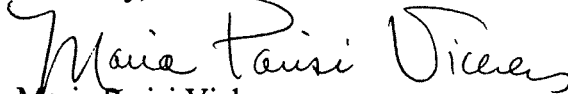
EPA will make every effort to coordinate its review of your application with the Maryland Department of the Environment (MDE). Therefore, you are requested to submit a copy of your application to the MDE's waste management office in Baltimore. Please submit two copies of the application to EPA.

You are entitled to submit a claim of business confidentiality covering all or any part of the submitted material. However, in order to substantiate your claim, you may be required to demonstrate inter alia that disclosure of the information is likely to cause substantial harm to your business's competitive position. See 40 CFR Part 2, Subpart B for a complete description of the rules regarding confidential business information (CBI).

In order to facilitate proper handling of CBI by EPA, you are requested to clearly label each page or drawing that is claimed confidential and physically separate that material from all nonconfidential information. Information claimed confidential will be made available to the public only in accordance with 40 CFR Part 2. Unless a confidentiality claim is asserted at the time the requested information is submitted, EPA may make this information available to the public without further notice to you.

If you have any questions regarding this letter or to discuss your risk assessment, please contact Luis Pizarro at (215) 814-3444 or at the address shown above.

Sincerely,

A handwritten signature in cursive script that reads "Maria Parisi Vickers".

Maria Parisi Vickers

Deputy Director

Waste and Chemicals Management Division

cc: Butch Dye, MDE

May 1, 2001

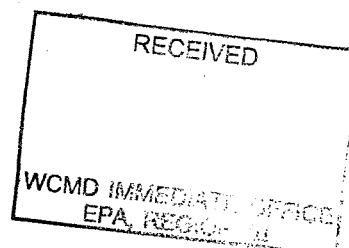
Correspondence Regarding Deferral of Deadline for Part B Permit Application



CERTIFIED LETTER: RETURN RECEIPT REQUESTED

May 1, 2001

Ms. Maria Parisi Vickers
Deputy Director
Waste and Chemicals Management Division
US EPA, Region III
1650 Arch Street
Philadelphia, PA 19103-2029



Dear Ms. Vickers:

This letter is in response to your call for the Part B application for Velsicol's interim status BIF operation. Velsicol requests that EPA defer the submittal date for the Part B application. A deferral would provide time for Velsicol to pursue waste minimization alternatives. The time requirements are spelled out in the enclosed schedule, which is covered in more detail below. The alternatives Velsicol is proposing would eliminate the need for RCRA permitting. Velsicol also requests that EPA grant a one year extension for the BIF Recertification of Compliance. This would allow Velsicol to direct its resources for development of the waste minimization alternatives.

Velsicol met with representatives of EPA Region III and MDE in February and March to propose our plans. With input from those meeting we were able to formalize an implementation schedule. The schedule primarily covers two alternatives. The first alternative is implementation of the Comparable Fuels Exclusion, CFE. The second alternative is offsite recycling. The schedule includes an estimated timeline for MDE to adopt the CFE and obtain EPA authorization. It also provides the offsite commitment and status reporting requested by EPA.

If during the next few months we find that offsite recycling is the better alternative, our plan is to complete that schedule. If not, we plan to concentrate our efforts on the CFE alternative. Since its implementation is a function of MDE's authorization, the dates in the schedule are conceptual. Our intention is to either implement the CFE within 60 days or begin sending waste offsite within 150 days from the date MDE receives authorization.

I look forward to your response. In the meantime, if you have any questions, please contact me at 847-635-3421.

Respectfully,

Patrick Kitchens, CHMM
Director, Environmental Health and Safety

Cc: Nancy VanEman, Velsicol
Scott Zurich, Velsicol
Chuck Hanson, Velsicol
Luis Pizarro, EPA Region III
Ed Hammerberg, MDE



Schedule for Shutting Down the Chestertown BIF Operation																			
Activity	2001								2002										
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Comparable Fuel Exclusion Alternative (Plan A)																			
R&D	—	▲	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Plant Trials										▲	—	—	—	—	—	—	—	—	—
Mgt. Approval												▲	—	—	—	—	—	—	—
Implementation															▲	—	—	—	—
Offsite Recycling Alternative (Plan B)																			
Qualify Vender	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Plant Trials				▲	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mgt. Approval						▲	—	—	—	—	—	—	—	—	—	—	—	—	—
Implementation								▲	—	—	—	—	—	—	—	—	—	—	—
MDE Adoption of Comparable Fuels Exclusion																			
MDE Authorization	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tolerable Delay													▲	—	—	—	—	—	—
Status Report to EPA																			
Velsicol Commitment to go offsite			X			X			X						X				X

May 24, 2001

Correspondence Regarding Deferral of Deadline for Part B Permit Application



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Patrick Kitchens, Director
Environmental Health and Safety
Velsicol Chemical Corporation
10400 W. Higgins Road
Rosemont, IL 60018

RE: Velsicol Chemical Corporation, Chestertown, Maryland
EPA ID No. MDD 00 189 0060

Dear Mr. Kitchens:

This is in response of your letter dated May 1, 2001, requesting a deferral of the deadline for submitting a Part B permit application for the Velsicol Chemical Corporation's Chestertown, Maryland plant. The United States Environmental Protection Agency (EPA) requested the permit application pursuant to authority granted under the Resource Conservation and Recovery Act (RCRA) and regulations set forth at 40 CFR Part 270. Your letter also requested a one-year extension to submit a Recertification of Compliance. The Recertification of Compliance is required by EPA's boiler and industrial furnace (BIF) rule, 40 CFR 266.103(d).

EPA hereby agrees to defer the deadline for submitting the Part B application, provided that Velsicol diligently pursues the waste management alternatives outlined in your May 1 letter. As a condition of this deferral, Velsicol must submit reports, as scheduled in your letter, demonstrating the company's progress toward implementing one or more waste management alternative that would eliminate the need for a RCRA permit. This deferral shall remain in effect until 60 calendar days after Maryland's Department of the Environment receives federal authorization to implement the comparable fuels exclusion of 40 CFR 261.38, or until 90 calendar days after Velsicol receives a written determination by EPA that the company has failed to make adequate progress toward implementing an alternative to burning hazardous waste in its process heaters, whichever occurs first.

EPA also grants a one-year extension to submit a Recertification of Compliance. Velsicol shall recertify compliance with the BIF rule no later than October 30, 2002, unless alternative waste management practices are in place by that time.

If you have any questions regarding this letter, please contact Luis Pizarro at (215) 814-3444 or at the address shown above.

Sincerely,

Maria Parisi Vickers
Deputy Director
Waste and Chemicals Management Division

cc: Ed Hammenberg, MDE
Nancy VanEman, Velsicol

CONCURRENCES							
SYMBOL	3WC22	3WC22					
SURNAME	PIZZARRO	GOTTHOLD					
DATE	5/09/01						

August 19, 2002

Correspondence Regarding Closure Plan for Boiler Industrial Furnace (BIF) Units



VELSICOL
CHEMICAL CORPORATION

AUG 21 2002

CERTIFIED LETTER: RETURN RECEIPT REQUESTED

August 19, 2002

Mr. Luis A. Pizarro
Environmental Engineer
Waste and Chemicals Management Division
3WC22
US EPA, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Dear Mr. Pizarro:

This letter is for the purpose of notifying you that Velsicol Chemical Corporate will initiate closure of its four interim status BIF units located in Chestertown, Maryland (EPA ID # MDD001890060) no later than October 31, 2002.

If you have any questions, please contact me at 847-635-3421.

Respectfully,

Patrick Kitchens, CHMM
Director, Environmental Health and Safety

Cc: Joanne Szymanski
Ed Hammerberg, MDE

96
A - 981-11
B - 981-11
C - 981-11



October 10, 2002

Correspondence Opposing Closure Plan for Boiler Industrial Furnace (BIF) Units

MICHAEL S. VARGO

415 MCNAIR DRIVE

BELVEDERE, S.C. 29841-2770

OCTOBER 10, 2002

I AM PROVIDING WRITTEN NOTICE OF OPPOSITION TO THE CLOSURE PLAN AND A WRITTEN REQUEST FOR A PUBLIC HEARING REGARDING THE CLOSURE PLAN FOR THE HAZARDOUS WASTE BURNING OPERATIONS AT THE VELSICOL CHEMICAL CORPORATION (VELSICOL), CHESTERTOWN MARYLAND PLANT. THE PLANT IS LOCATED AT 10380 WORTON ROAD, CHESTERTOWN, MARYLAND, EPA, I.D. NO. MDD001890060.

I OPPOSE THE BURNING OF THE BOILERS BECAUSE THEY ARE WITHIN 5 MILES OF THE TOWN OF WORTON AND THE INHABITANTS THAT LIVE IN THE TOWN. HOUSING DEVELOPMENT. I FEEL THAT CONTINUE USE OF THE BOILER PRESENT A AIR QUALITY HEALTH HAZARD TO THE NEARBY COMMUNITY OF WORTON AS WELL AS THE RESIDENTS OF CHESTERTOWN, ROCK HALL, CENTREVILLE AND MILLINGTON. I PROPOSE THAT U.S. GOVERNMENTS STUDIES BE MADE OF THE CONTENTS TO BE BURNED AND THEIR IMPACT ON THE AFOREMENTIONED COMMUNITIES.

THIS REQUEST IS IN PURSUANT TO 40 C.F.R. PART 265, SUBPART G + 265.1124, (4) OF THE REGULATIONS PROMULGATED UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA). I FURTHER REQUEST THAT ALL PUBLIC HEARINGS BE HELD IN CHESTERTOWN, MARYLAND

YOURS TRULY,

MICHAEL S. VARGO

Michael S. Vargo

October 25, 2002

Correspondence Regarding Public Hearing About Closure Plan of Boiler Industrial
Furnace (BIF) Units

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

October 25, 2002

SUBJECT: Velsicol Closure Plan - Michael Vargo, Private Citizen
Public Hearing Request

FROM: Luis Pizarro, Environmental Engineer

TO: Velsicol File

On a letter date October 10, 2002, Mr. Michael Vargo requested a public hearing on the closure plan of the boilers at Velsicol Chemical Corp. In his letter Mr. Vargo stated that he opposed the burning of hazardous waste in the boilers, but had no comments specific to the closure plan.

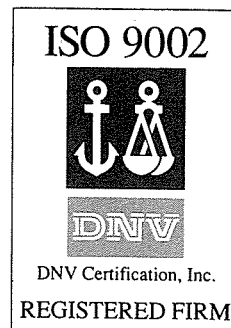
EPA published a notice with its intent to approved the closure plan, and no other comments on the closure plan were received. On telephone conversations on October 21 and 24 2002, I explained the approval process to Mr. Vargo. I explained to him that the purpose of the plan was to specify the steps and procedures to stop burning hazardous waste in its boilers, that included the removal or decontamination of all hazardous waste residues. Mr. Vargo stated that he did not have any comments on the specifics of the plan and withdrew his request for a public hearing.

Thus, there are no changes are required to the closure plan and EPA will approve it.



December 6, 2002

Correspondence Regarding Closure of BIF Units



To: Joanne Szymanski
From: John E. Sisson

Date: December 6, 2002

Subject: BIF Closure – Final System Cleanup and Post BIF Preparations and Setup

Compliance with the October 31, 2002 target date for completion of burning toluene containing by-product fuel required completion of several system elements prior to the initial burning of either CFE and non-CFE types of by-product fuel. These final elements included the consumption of the final fuel containing toluene, emptying of the fuel storage tank, and final system cleanout and system flush.

On October 28, 2002 the following actions were completed to cleanout and flush tank 324.

- The by-product fuel storage tank 324 (containing toluene) was pumped empty into tank 339. The final tank heel estimate was <200 lbs.
- The tank 324 manway was removed and the tank was inspected. The tank was observed to be in good condition. The tank manway was reinstalled. At this time tank 324 was off-line from the fuel circulation system.
- The by-product fuel circulation system was valved to feed the burner nozzles directly from tank 339 and return to tank 339.

On October 29, 2002 the first lot of toluene free by-product fuel was temporarily transferred to 324 for storage.

On October 30, 2002 the following action items were completed:

- The final lot of by-product fuel containing toluene was consumed from tank 339
- Once tank 339 was at the minimum operating level of 4 inches (tank sump), the burner feed lines and the system circulation lines were blown empty into tank 339 with nitrogen.
- The toluene free by-product fuel was then transferred through the re-circulation system from tank 324 to tank 339, and circulated for one (1) hour.
- This entire inventory of non-BIF by-product fuel was then transferred from tank 339 back into tank 324. Tank 339 was confirmed empty by visual inspection of the tank sump.
- The system valves were reset for normal operation to feed the burners from tank 324 and re-circulate back into tank 324.
- Samples for G.C. were then collected from tank 324 and at hot oil unit #1, hot oil unit #2, hot oil unit #3 and the 250 CB boiler. Note: The samples collected at each unit were taken off of the individual Cuno filters and not near the burner nozzles. A sample taken near the nozzles during a previous 3 year BIF certification resulted in severe second degree burns to the individual and is determined to present a safety hazard. The existing Cuno filters are within 21 feet of the burner nozzles and are an adequate representative sample of fuel fed to the burner nozzles.

Final System Toluene Composition
By G.C. Analysis

Unit	G.C. %
Tank 324	1.27
Hot Oil Unit #1	1.37
Hot Oil Unit #2	1.27
Hot Oil Unit #3	1.30
250 CB Boiler	1.34



The initial consumption of non-BIF by-product fuel commenced at approximately 1600 hours on October 30, 2002.

John E. Sisson P.E.
Sr. Process Engineer

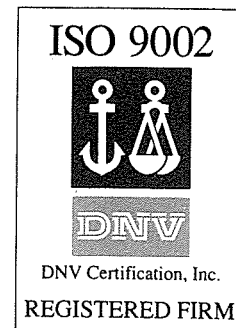
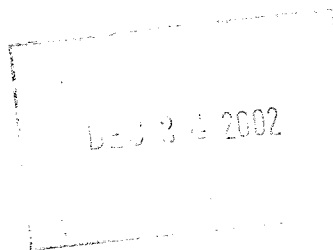
John E. Sisson 12/20/02

December 20, 2002

Correspondence Regarding Closure of BIF Units



December 20, 2002



Luis Pizarro
EPA-Region III-3WC22
1650 Arch Street
Philadelphia, PA 19103-2029

CERTIFIED MAIL
Return Receipt Requested

RE: Closure of BIF Units

Dear Mr. Pizarro,

This letter is written to certify the closure of permitted hazardous waste burning operations at the Chestertown facility, EPA ID No. MDD001890060, per the closure plan approved by the EPA.

Attached closure documentation:

- Certification by Velsicol Chemical Corporation
- Certification by a qualified, licensed Professional Engineer (P.E.)
- Velsicol Chemical Corporation Senior Process Engineer's closure activities documentation
- Copy of the Closure Plan (Option #3)

If you have any questions or require further information, please contact me at 410-778-1991, ext. 252.

Sincerely,

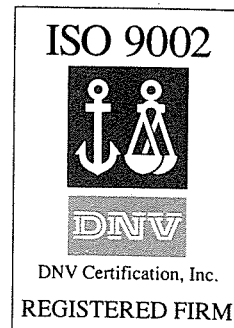
A handwritten signature in cursive script that reads "Joanne K. Szymanski".

Joanne K. Szymanski
EHS Coordinator

Attachments

Cc: Ed Hammerberg, MDE, Hazardous Waste Program, Baltimore, MD
Pat Kitchens, EHS Director, Velsicol Chemical Corporation, Rosemont, IL






**Velsicol Chemical Corporation
Chestertown, Maryland Facility**

BIF Closure Certification

I certify under penalty of law that the attached documents were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

By:  Date: 12/20/02
Michael C. Kraus
Plant Manager

BIF Closure Professional Engineer Certification

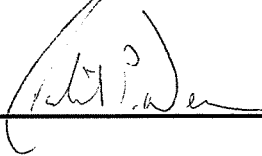
In 2002, Velsicol Chemical Corporation developed a closure plan for BIF units at the Chestertown, Maryland facility. Prior to developing the closure plan, the units had been operating under BIF Interim Status provisions. The closure plan and cost estimate covered the interim status BIF units, which consists of the four combusters and the ancillary piping (i.e., recirculation loop including the header that feeds the units). The plan identified the steps necessary to perform final closure of the BIF units as operating interim status facilities per 40 CFR 265 Subparts G and H. This plan also provided a closure plan and cost estimate to cover our financial assurance requirements during interim status operations. This plan was designed to ensure that the facility:

1. Will not require further maintenance and controls;
2. Minimizes or eliminates threats to human health and the environment; and
3. Avoids escape of hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition products to the ground or surface waters of to the atmosphere.

As referenced in the plan, the units will continue to operate using comparable fuel as described in 40 CFR 261.4 (a)(16) or fuel oil #6 after closure as interim status facilities.

On October 28 – 30, 2002, the provisions of the Closure Plan were implemented. This included the provisions for waste movement, system clean-up, spill controls, and the final system toluene composition analysis. It is hereby certified that all required activities were accomplished pursuant to the plan and the BIF closure requirements were attained. On October 30, 2002 the combustion systems commenced the firing of non-BIF by-product fuel.

Certified by:



12/17/02

Robert P. Newman, P.E., DEE
Maryland Professional Engineer # 23514
EA Engineering, Science, and Technology, Inc.
December, 12, 2002



October 5, 2005

Source Water Assessment Report



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

410-537-3000 • 1-800-633-6101

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor

Kendl P. Philbrick
Secretary

Jonas A. Jacobson
Deputy Secretary

October 5, 2005

Ms. Joanne Szymanski
Velsicol Chemical Corporation
10380 Worton Road
Chestertown, MD 21620

Re: 114-0009 Velsicol Chemical Corporation, Source Water Assessment Report

Dear Ms. Szymanski:

The 1996 Amendments to the Safe Drinking Water Act require the State to complete source water assessments for all public water supplies. The Maryland Department of the Environment's Water Supply Program (WSP) is responsible for the completion of these assessments.

The enclosed Source Water Assessment for Velsicol Chemical Corporation is based on existing data, geologic reports, sanitary surveys, field inspections and monitoring data. As stated in Maryland's Source Water Assessment Plan, the WSP will provide copies of the report to the water supplier, county planning, environmental health, main branches of county libraries, and interested citizens and groups upon request. Due to security concerns, figures showing locations of the wells have been removed from the copy of the library.

The source water assessment report also provides you with information on how to protect your water supply. To obtain more information on Wellhead Protection Program or if you have any questions regarding this report, please contact me at (410) 537-3714.

Sincerely,

Norman H. Lazarus,
Source Protection and Appropriation Division
Water Supply Program

Enclosure

cc: Kent County Department of Planning
Kent County Public Library
Kent County Environmental Health

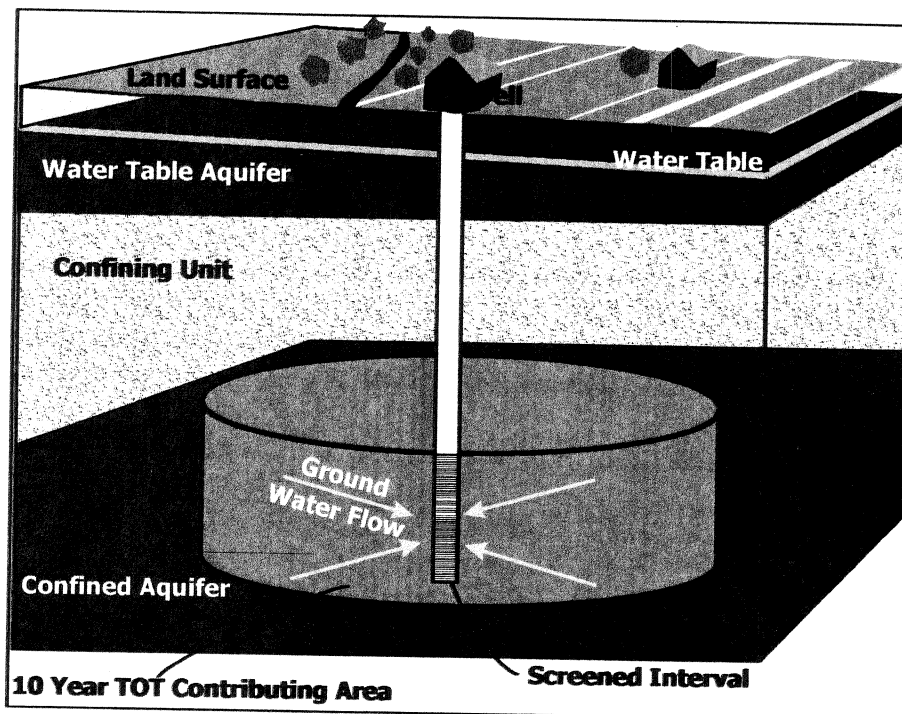


Recycled Paper

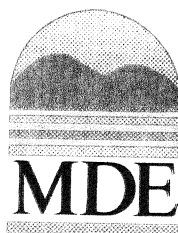
www.mde.state.md.us

TTY Users 1-800-735-2258
Via Maryland Relay Service

SOURCE WATER ASSESSMENT
FOR VELSICOL CHEMICAL CORPORATION
KENT COUNTY, MD



Prepared By
Water Management Administration
Water Supply Program
October 2005



Robert L. Ehrlich
Governor

Kendl P. Philbrick
Secretary

Michael S. Steele
Lt. Governor

Jonas A. Jacobson
Deputy Secretary

TABLE OF CONTENTS

	Page
Summary.....	1
Introduction.....	2
Well Information.....	2
Table 1. Velsicol Chemical Corporation Well Information	
Hydrogeology.....	3
Source Water Assessment Area Delineation	3
Potential Sources of Contamination.....	4
Water Quality Data	5
Table 2. Summary of Water Quality Samples for the Velsicol Chemical Corporation Water Supply.	
Table 3. VOC detections in Velsicol Chemical Corporation's Water Supply	
Susceptibility Analysis.....	6
Table 4. Susceptibility summary for Velsicol Chemical Corporations Water Supply	
Management of the WHPA.....	8
References.....	10
Other Sources of Data.....	10

Figures	12
Figure 1. Location Map for Velsicol Chemical Corporation's Wells	
Figure 2. Wellhead Protection Area for Velsicol Chemical Corporation with Potential Contaminant Sites	
Appendix.....	12
CERCLA Fact Sheet for Tenneco Chemicals, Chestertown, Maryland	

SUMMARY

The Maryland Department of the Environment's Water Supply Program (WSP) has conducted a Source Water Assessment for Velsicol Chemical Corporation. The required components of this report as described in Maryland's Source Water Assessment Plan (SWAP) are: 1) delineation of an area that contributes water to the source, 2) identification of potential sources of contamination, and 3) determination of the susceptibility of the water supply to contamination. Recommendations for protecting the drinking water supply conclude this report.

The source of Velsicol Chemical Corporation's water supply is a confined Coastal Plain aquifer known as the Monmouth Formation. The system currently uses four wells to obtain its drinking water. The Source Water Assessment Area was delineated by the Water Supply Program using U.S. EPA approved methods specifically designed for each source.

Potential sources of contamination within the assessment area were identified based on site visits, and database reviews. Well information and water quality data were also reviewed. A figure potential contaminant sources within the Source Water Assessment Area and an aerial photograph of the well locations are enclosed at the end of the report.

The susceptibility analysis for the Velsicol Chemical Corporation water supply is based on a review of the water quality data, potential sources of contamination, aquifer characteristics, and well integrity. It was determined that Velsicol Chemical Corporation's water supply is not susceptible contaminants originating at the land surface due to the protected nature of confined aquifer. It is susceptible to naturally occurring iron for which it is being treated.

INTRODUCTION

The Water Supply Program has conducted a source water assessment for the Velsicol Chemical Corporation water supply in Kent County (figure 1). Velsicol Chemical Corporation is a manufacturer of plasticizers and synthetic lubricants and has undergone several ownership changes in its history (see appendix). The Velsicol Chemical Corporation water supply is considered a nontransient noncommunity (NTNC) water system, which is defined as a public water system that regularly serves at least 25 of the same individuals over six months per year. The facility owns and operates its water supply system and serves water to 44 employees.

WELL INFORMATION

Well information was obtained from the Water Supply Program's database, site visits, well completion reports, sanitary survey inspection reports and published reports. Velsicol currently uses 4 wells (Well Nos. 3, 4, 5, and 6) for water supply (sanitary and industrial processing) Well Nos. 3 and 6 are the main production wells with 4 and 5 being used as standby wells. A review of well data and sanitary surveys of the Velsicol Chemical Corporation water system indicates that three out of the four wells were drilled after 1973, when the State's well construction regulations went into effect. A review of the well completion report for Well No. 4 (drilled prior to current regulations) indicated that it was grouted with cement down to 60 feet and appears to meet current well construction standards. All of the supply wells appear to meet proper well construction standards. There are several monitoring wells on site that are required by a discharge permit as well as past and ongoing ground water remediation efforts. The water supply well information is shown in Table 1 below.

WELL NAME	USE CODE	PERMIT NO	TOTAL DEPTH (ft)	CASING DEPTH (ft)	YEAR DRILLED
Velsicol Potable Well 3	P	KE880798	178	158	1994
Velsicol Potable Well 4	S	KE710067	175	110	1971
Velsicol Potable Well 5	S	KE811361	178	158	1989
Velsicol Potable Well 6	P	KE0880494	180	160	1992

Table 1. Velsicol Chemical Corporation Well Information.

Velsicol Chemical Corporation has a Water Appropriation Permit that allows it to use an average of 100,000 gallons per day (gpd) and 120,000 gpd in the month of maximum use. Most of the water is for industrial use and the facility uses bottled water for drinking. Based on past 3 years pumpage reports submitted to MDE, the facility used an average of 73,961 gpd and 104,394 gpd in the month of maximum use.

HYDROGEOLOGY

Ground water flows through pores between gravel, sand and silt grains in unconsolidated sedimentary rock aquifers such as the one used by Velsicol Chemical Corporation. An aquifer is any formation that is capable of yielding a significant amount of water. Transmissivity is a measure of the amount of water an aquifer is capable of producing and is related to the hydraulic conductivity and the thickness of the aquifer. A confining layer is generally composed of fine material such as clay and silt, which transmits relatively very little water. Confined aquifers are those formations that are overlain by a confining unit. Confined aquifers are recharged from the water stored in the confining unit above and from precipitation that infiltrates into the formation where it is exposed at the surface.

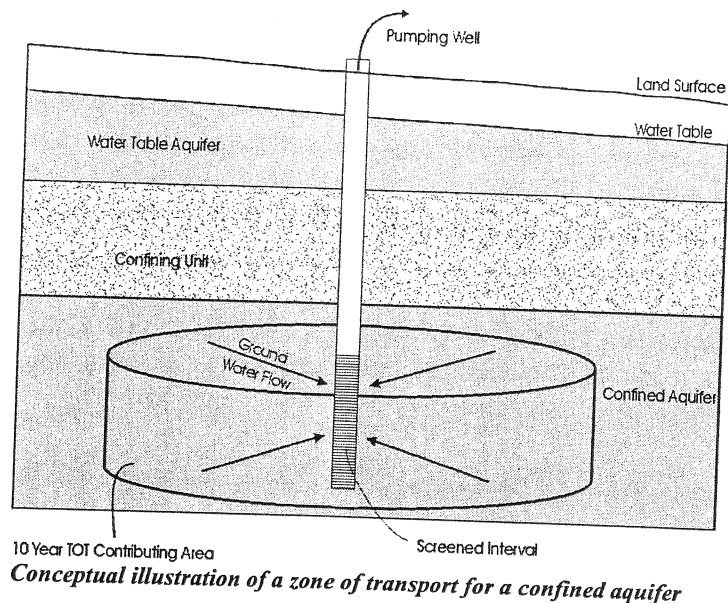
The Velsicol Chemical Corporation site lies within the Atlantic Coastal Plain physiographic province. This province, which in Maryland includes roughly the area east of Interstate 95, is underlain by unconsolidated clastic sediments of Lower Cretaceous to recent age, which thicken to the southeast so that they appear wedge-shaped. These sediments crop out in a concentric band that lies parallel to the Fall Line, which marks the western boundary of the Coastal Plain. The Velsicol Chemical Corporation wells pump water from the Monmouth Formation. At this location, the Monmouth is a confined aquifer with the top of the aquifer about 30 feet below sea level and bottom about 105 feet below sea level. The Monmouth aquifer is fine- to medium-grained glauconitic quartz sand with clayey layers and calcareous beds. The sandy intervals are light olive-gray, and the clayey layers are medium- to dark-greenish gray (Drummond, 1998).

SOURCE WATER ASSESSMENT AREA DELINEATION

For ground water systems, a Wellhead Protection Area (WHPA) is considered to be the source water assessment area for the system. The WHPA for Velsicol Chemical Corporation's wells was delineated using the methodology described in Maryland's Source Water Assessment Plan (1999) for confined aquifers in the Coastal Plain, often referred to as the "Florida Method". The area is a radial zone of transport within the aquifer and is based on a 10 year time of travel (TOT), pumping rate and the screened interval(s) of the well or wells included in the WHPA, and the porosity of the aquifer (see illustration below for conceptual model). The Florida Method is a modification of Darcy's Law for radial flow to a well and the WHPA was calculated using the following volumetric equation:

$$r = \sqrt{\frac{Qt}{\pi nH}}$$

where r = calculated fixed radius (ft)
 Q = pumping rate of well (ft³/yr)
 n = aquifer porosity (dimensionless)
 H = length of well screen (ft)
 t = time of travel (yr.)



Velsicol Chemical Corporation has a water appropriation permit for 100,000 gallons per day (gpd). Since only two wells are being used at a time the pumping rate (Q) used for each well is 50,000 gpd. A conservative estimate of porosity (n) of 25% was used for the aquifer based on published reports. Since the lengths of the well screen (H) for the wells were much smaller than the saturated thickness of the aquifer was used. The saturated thickness of the aquifer is 75 ft. Using these parameters a radius of 643 feet (rounded off to 700 ft) was calculated for each well for the WHPA delineation using the above equation. The circles for each well were merged to form one larger WHPA as shown in Figure 2. The circle represents the aquifer zone of transport in the subsurface as illustrated above.

POTENTIAL SOURCES OF CONTAMINATION

In confined aquifer settings, sources of contamination at the land surface are generally not a threat unless there is a pathway for direct injection into the deeper aquifer such as unused wells or along well casing that are not intact or have no grout seal. Wells that are not being used or maintained will eventually corrode and provide a pathway for contaminants present in the shallow aquifers at higher-pressure heads to migrate to the deeper aquifers.

Potential sources of contamination identified at the land surface have the potential to impact the shallow water table aquifer. Based on the MDE databases and site inspections several potential sources of contamination were identified on the Velsicol Chemical Corporation WHPA. This facility (D) is identified as a CERCLA (Superfund) site for potential hazardous wastes, with an EPA designation of No Further Remedial Action Planned (NFRAP) for it. In 1989 high levels of organic compounds (especially phthalates) were detected in the unconfined aquifer near a

wastewater impoundment (site B). MDE requested the facility to submit a Closure Plan for the impoundment which included a remediation goal of 770 ppb for the phthalate concentration in the ground water. The remediation of the site has been completed. In 2004, the shallow ground water aquifer in the area around the Fire Pond (Site A) was found to high levels of benzene, toluene and phthalates. Velsicol submitted a ground water remedial action plan for this site. MDE has reviewed and approved this plan which is being currently implemented. Velsicol also has a discharge permit which allows it to discharge treated wastewater into an unnamed tributary to Morgan Creek which flows by along the northeast portion of the property. The permit allows the facility to land apply biological sludge on drying beds (site C) hill downgradient of all the potential contaminants sources. These sites are shown in figure 2.

WATER QUALITY DATA

Water Quality data was reviewed from the Water Supply Program's database and system files for Safe Drinking Water Act contaminants. The State's SWAP defines a threshold for reporting water quality data as 50% of the Maximum Contaminant Level (MCL). If a monitoring result is at or greater than 50% of a MCL, this assessment will describe the sources of such a contaminant and, if possible, locate the specific sources which may be the cause of the elevated contaminant level. All data reported is from the finished (treated) water unless otherwise noted. The current treatment for the Velsicol Chemical Corporation water system is oxidation and filtration for removal of iron.

A review of the monitoring data since 1993 for the Velsicol Chemical Corporation water supply indicates that it meets the current drinking water standards. The water quality sampling results are summarized in Table 4.

PLANT NO	IOCs		SOCs		VOCs		Radionuclides*	
	No. of Samples Collected	No. of samples > 50% MCL	No. of Samples Collected	No. of samples > 50% MCL	No. of Samples Collected	No. of samples > 50% MCL	No. of Samples Collected	No. of samples > 50% MCL
01	68	0	2	0	10	0	0	0

Table 2. Summary of Water Quality Samples for the Velsicol Chemical Corporation Water Supply.

Inorganic Compounds (IOCs)

No IOCs above 50% of the MCL have been detected in Velsicol Chemical Corporation's water supply. Naturally occurring iron is present in the raw water supply and removed through oxidation and filtration. Iron does not have an MCL but has a secondary standard of 0.3 ppm based on taste and color.

Volatile Organic Compounds (VOCs)

No VOCs above 50% of the MCL have been detected in Velsicol Chemical Corporation's water supply. Very low levels of xylenes, toluene and p-dichlorobenzene have been detected in the water supply (table 3).

CONTAMINANT ID	CONTAMINANT NAME	MCL (ppb)	SAMPLE DATE	RESULT (ppb)
2955	XYLENES, TOTAL	10000	09-MAR-93	4
2991	TOLUENE	1000	07-APR-93	1
2955	XYLENES, TOTAL	10000	07-APR-93	2
2969	p-DICHLOROBENZENE	75	22-FEB-05	.6

Table 3. VOC detections in Velsicol Chemical Corporation's Water Supply

Synthetic Organic Compounds (SOCs)

No SOC's have been detected in Velsicol Chemical Corporation's water supply.

Radionuclides

Nontransient noncommunity systems are currently not regulated for radionuclides. Currently no radionuclide sampling data is available for this water supply.

Microbiological Contaminants

Routine bacteriological monitoring is conducted in the finished water for each noncommunity nontransient water system on a quarterly basis and measures total coliform bacteria. Total coliform bacteria are not pathogenic, but are used as an indicator organism for other disease-causing microorganisms. A major breach of the system such as due to flooding a well, ruptured water line or back siphonage of contaminated water could cause a positive total coliform result in the distribution system, and would require follow-up total and fecal coliform analysis. Since 1996 Velsicol Chemical Corporation has conducted routine bacteriological sampling 40 times, but no samples had any detections of total coliform bacteria.

SUSCEPTIBILITY ANALYSIS

The wells serving Velsicol Chemical Corporation's water supply pump water from confined aquifers. Confined aquifers are naturally well protected from activity on the land surface due to the confining layers that provide a barrier for water movement from the surface into the aquifer below. A properly constructed well with the casing extended to the confining layer above the aquifer and with sufficient grout should be well protected from contamination at the land surface. Wells that are not being used or maintained will eventually corrode and provide a pathway for contaminants present in the shallow aquifers at higher-pressure heads to migrate to the deeper aquifers. The information that was used to conduct the susceptibility analysis is as follows: (1) available water quality data (2) presence of potential contaminant sources in the WHPA (3) aquifer characteristics (4) well integrity and (5) the likelihood of change to the natural conditions. The susceptibility of the

Velsicol Chemical Corporation water supply to the various contaminant groups in shown in table 4 at the end of this section.

Inorganic Compounds (IOCs)

No IOCs have been detected above 50% of the MCL in the Velsicol Chemical Corporation water supply. Due to high levels of naturally occurring iron in the aquifer, the system uses treatment for iron removal from the water supply.

Based on above analysis the Velsicol Chemical Corporation water supply is susceptible to iron but not to other inorganic compounds.

Volatile Organic Compounds (VOCs)

No VOCs above 50% of the MCL have been detected in Velsicol Chemical Corporation's water supply since 1993. As discussed earlier, there are several potential contamination sources of VOCs in the WHPA and known ground water contamination of the shallow aquifer. Water quality data indicates that these sources have not negatively affected the water supply in part due to the confined nature of the Monmouth aquifer.

Based on the above discussion, Velsicol Chemical Corporation's water supply is **not** susceptible to VOC contamination.

Synthetic Organic Compounds (SOCs)

No SOCs have been detected in Velsicol Chemical Corporation's water supply. As discussed earlier, there are several potential contamination sources of SOCs (phthalates) in the WHPA and known ground water contamination of the shallow aquifer. Water quality data indicates that these sources have not had a negative impact on the water supply in part due to the confined nature of the Monmouth aquifer.

Based on the above analysis, Velsicol Chemical Corporation's water supply is **not** susceptible to SOC contamination.

Radionuclides

Nontransient noncommunity systems are currently not regulated for radionuclides. No monitoring results for radionuclides were available for this water supply. No determination about the susceptibility of Velsicol Chemical Corporation's water supply to radionuclides can be made at this time.

Microbiological Contaminants

Raw water monitoring for microbiological contaminants is not required of water systems in confined aquifers because they are considered naturally protected from sources of pathogens at the land surface. Routine bacteriological testing for these plants revealed no positive total coliform in the water supply. Therefore, Velsicol Chemical Corporation's water supply **is not** susceptible to microbiological contaminants.

CONTAMINANT TYPE	Are Contaminant Sources present in the WHPA?	Are Contaminants detected in WQ samples at 50% of the MCL	Is Well Integrity a Factor?	Is the Aquifer Vulnerable?	Is the System Susceptible to the Contaminant
Iron	YES (naturally occurring)	NO	NO	NO	YES
Inorganic Compounds (except iron)	NO	NO	NO	NO	NO
Volatile Organic Compounds	YES	NO	NO	NO	NO
Synthetic Organic Compounds	YES	NO	NO	NO	NO
Radionuclides	NO	NO WATER QUALITY DATA	NO	NO	CANNOT BE DETERMINED
Microbiological Contaminants	NO	NO	NO	NO	NO

Table 4. Susceptibility Summary for Velsicol Chemical Corporation's water supply.

MANAGEMENT OF THE WHPA

The Velsicol Chemical Corporation site has had known ground water contamination in the shallow aquifer. Long term monitoring of the deeper confined aquifer has shown no indication of any contamination. Confining clay layer above this Monmouth aquifer has prevented the migration of contaminants at the surface and shallower aquifer into this aquifer. The following recommendations for protection of the water supply are listed below:

Monitoring

- Continue to monitor for all Safe Drinking Water Act contaminants as required by MDE.
- Periodically monitor the contaminants found in the shallow aquifer in the deeper confined aquifer to ensure that it is not breached.
- Conduct annual raw water bacteriological testing of the supply wells to ensure well integrity

Contaminant Source Inventory/Well Inspection

- Conduct a survey of the WHPA and inventory any potential sources of contamination, including unused wells that are drilled into the Monmouth aquifer.
- Periodic inspections and a regular maintenance program for the supply wells will ensure their integrity and help protect the aquifer from contamination.

Cooperative Efforts with Other Agencies

- Work closely with Kent County Health Department to identify any unused wells in the WHPA and to ensure that they are abandoned and sealed in compliance with the State's well construction standards.

Changes in Use

- Any increase in pumpage or addition of new wells to the system may require revision of the WHPA. The system is required to contact the Water Supply Program when an increase pumpage is applied for or when new wells are being considered.

REFERENCES

- Bolton, David W., 1996, Network Description and Initial Water-Quality Data from a Statewide Ground-Water Quality Network in Maryland: Maryland Geological Survey Report of Investigations No. 60, 167 p.
- Drummond, David D., 1998, Hydrogeology, Simulation of Ground-Water Flow, and Ground-Water Quality of the Upper Coastal Plain Aquifers in Kent County, Maryland: Maryland Geological Survey Report of Investigations No. 68. 76p.
- Maryland Department of the Environment, Water Supply Program, 1999, Maryland's Source Water Assessment Plan, 36 p.
- Tompkins, M. D., Cooper, B. F., and Drummond, D. D., 1994, Ground-Water and Surface-Water Data for Kent County, Maryland: Basic Data Report No. 20, 155p.

OTHER SOURCES OF DATA

Water Appropriation and Use Permit: KE1959G002
Public Water Supply Inspection Reports
MDE Water Supply Program Oracle Database
MDE Waste Management Sites Database
Department of Natural Resources Digital Orthophoto Quarter Quadrangles:
Betterton
USGS Topographic 7.5 Minute Betterton Quadrangle

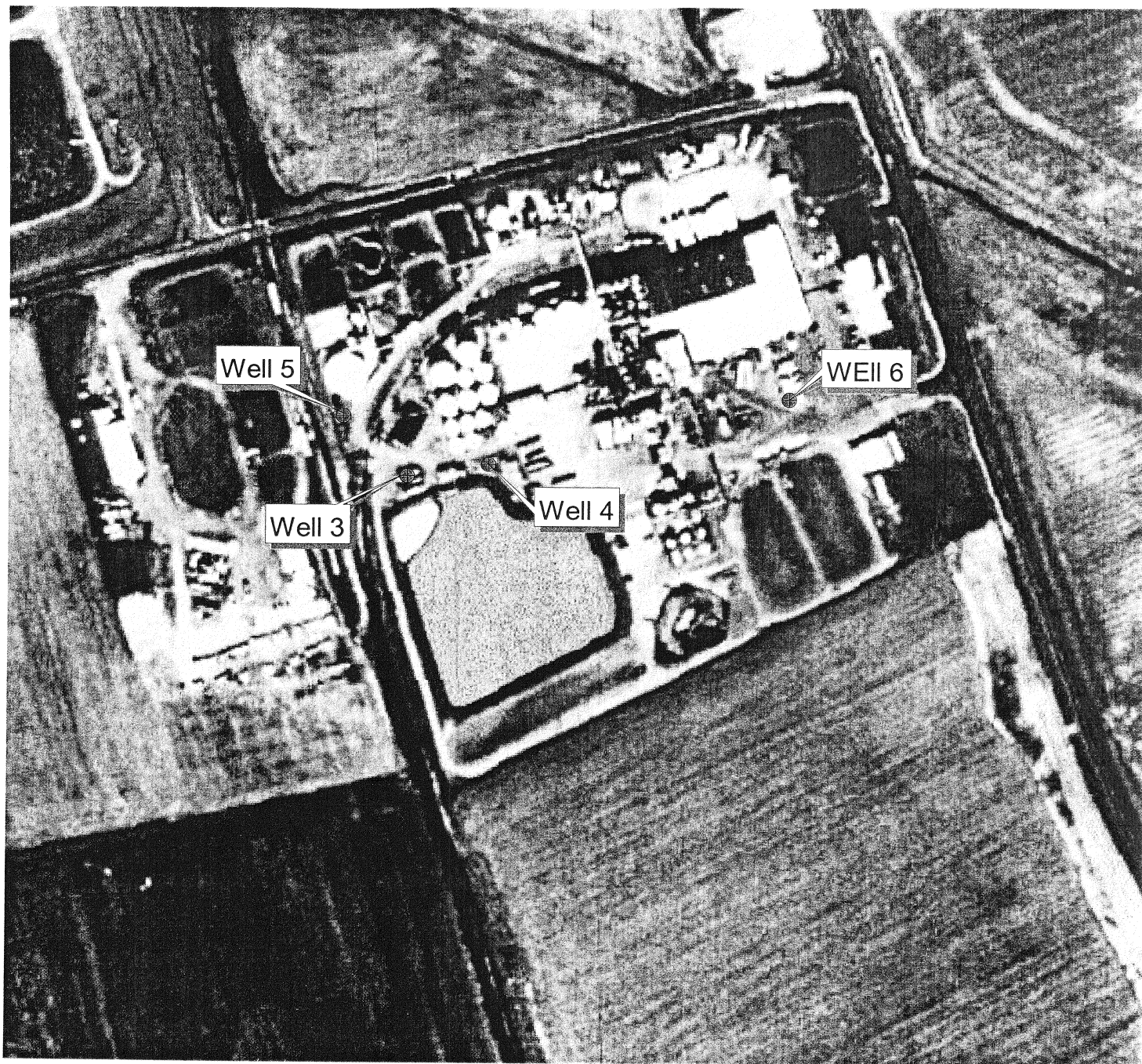
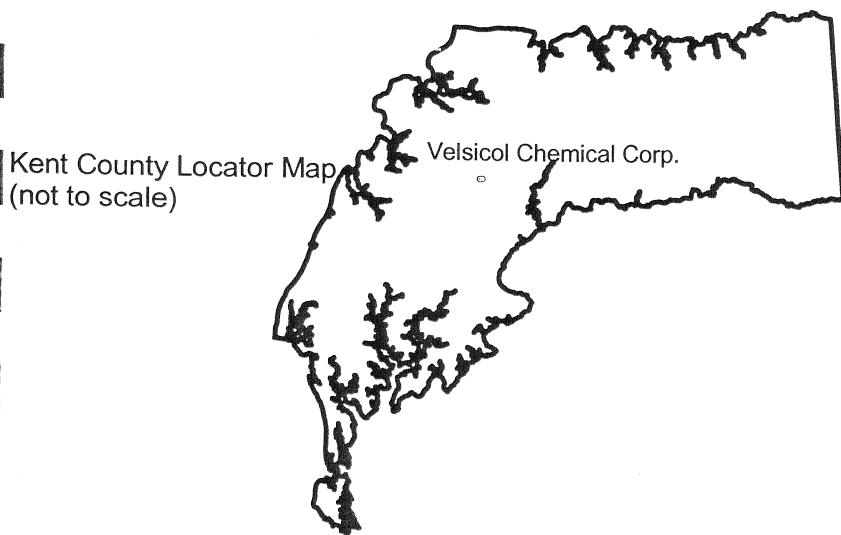



Figure 1. Location Map for Velsicol Chemical Corporation's Wells



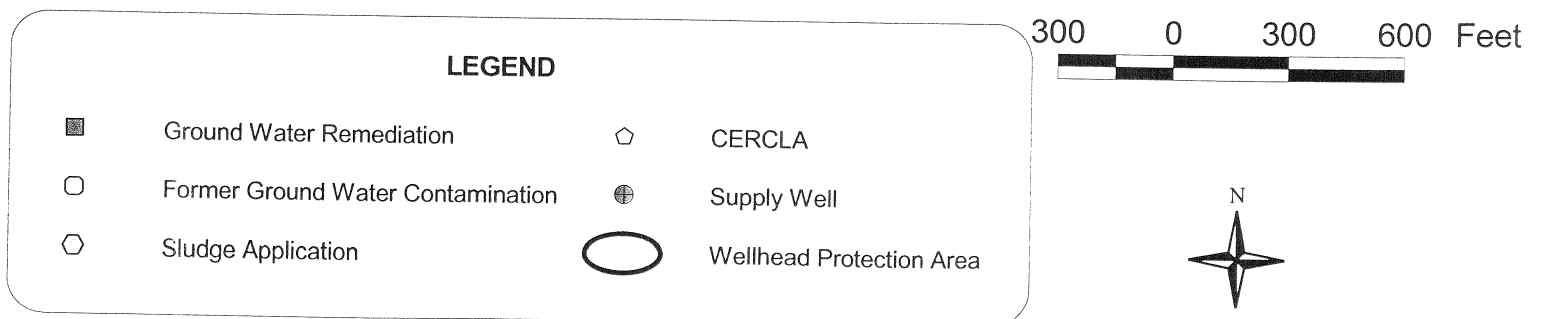
200 0 200 Feet



Base Map: DNR DOQQ Betterton SE (1993)



Fig. 2. Wellhead Protection Area for Velsicol Chemical Corporation with Potential Contaminant Sites



Base Map: USGS 7.5 Minute Topographic Quadrangle - Betterton

APPENDIX

CERCLA FACT SHEET

MD-28 Kent County

- 1951 Lehigh Chemical began to manufacture plastics and polymers.
- 1957 Lehigh moved facility to location on State Rt. 297.
- 1964 Tenneco Chemical purchased Lehigh Chemical.
- 1979 Site listed in Eckhardt Report.
- 1982 Nu-Dex purchased plant.
Hazardous Waste Site Assessment Reports, Final Report completed.
- 1984 DHMH sampled soil and groundwater at the site.
- 1986 DHMH completed *Site Inspection of Tenneco Chemicals, Inc.* report.
- 1989 MDE approved a closure plan for Impoundment 314.
- 1999 MDE concluded the site does not present a risk to Kent County Sanitary District's Worton Water System.

TENNECO CHEMICALS Chestertown, Maryland

Site Location

The Tenneco Chemicals, Inc. facility (now owned by Velsicol Chemical Corporation) is located on MD Route 297, two miles north of the intersection of Maryland Routes 297 and 213 in Chestertown, Kent County, Maryland. The site size is 10 acres. A wastewater treatment plant and sludge-settling basin (lagoon) are located in the northeastern corner of the site. Production facilities and storage tanks are located in the northern portion of the site. The site is situated on the eastern shore of Maryland, in the Coastal Plain Physiographic Province. The area is generally agricultural land. An unnamed, intermittent stream that flows east toward Morgan Creek is 1/4 mile east of the site.

Site History

The Chestertown plant began manufacturing plastics and polymers in 1951. During the period 1951 through 1964, the plant was known as Lehigh Chemical Company and was located on Flatland Road in Chestertown, MD. In 1959, Lehigh moved its facility to Maryland Route 297 where the present-day plant is located. In 1964, Tenneco Chemicals bought Lehigh and the plant became known as Tenneco Chemicals, Inc. In 1982, Nu-Dex purchased the plant from Tenneco. The next owner of the plant was Huls America Company who owned the plant in 1989, although it is not known when they purchased or sold the facility. The plant owner in 1999 was Velsicol Chemical Corporation.

The wastes generated at the plant included plasticizers, polar and non-polar solvents, oil and oil sludges, esters, ethers, alcohols, and scrubber residuals. From 1951 through 1964, Tenneco (formerly Lehigh) disposed of 402,000 gallons of liquid wastes and 500 tons of solid wastes at the Kent Price Landfill located on Flatland Road in Chestertown. The Kent Price operation closed in 1964. From 1965 until 1979, Tenneco disposed of 7,245,000 gallons of liquid wastes and 9,000 tons of solid wastes at the Nicholson Landfill located west of Earl Nicholson Road and east of State Route 298 in Chestertown.

Tenneco officials stated in 1981 that chemical process wastes were never disposed of on-site at their Chestertown plant. The only disposal that occurred on site was of some liquid wastes, such as alcohols and plastic scraps, which were used as fuel supplements and burned in on-site plant boilers. Biosludges from wastewater ponds were incorporated into the land at the Chestertown plant using land-farming techniques. The bio-treatment process began in the late 1960s and the land-farming procedures began in 1971 or 1972. Solid wastes were always disposed of elsewhere.

Environmental Investigations

The Tenneco Chemicals site was listed in the 1979 *Waste Disposal Site Survey* prepared by The Subcommittee on Oversight and Investigations of the House Committee on Interstate and Foreign

Commerce (The Eckhardt Report). The report stated that 30,168 tons of chemical process wastes were disposed of on the Chestertown plant site between 1959 and 1979. An undated U.S. Environmental Protection Agency (EPA) computer printout reported that during the same period, 7,500 tons and 6,037,000 gallons of wastes were disposed of on-site.

A 1982, *Hazardous Waste Site Assessment Reports, Final Report* prepared for the EPA and Maryland Department of Health and Mental Hygiene (DHMH) concluded that probably no disposal other than that described by Tenneco officials (burning of liquid wastes in plant boilers and land-spreading of sludge from on-site treatment plant) had occurred on site. They reasoned that DHMH and Maryland Water Resources Administration inspectors conducting regular inspections of the Tenneco site would have noticed any disposal other than that described. The 1982 report further noted that the Tenneco statements regarding on-site waste disposal contradicted information reported in the Eckhardt Report and the EPA printout, and concluded that one possible explanation for the inconsistencies may have been that the Eckhardt Report forms were filled out incorrectly. The report recommended undertaking efforts to reconcile the inconsistencies in reported quantities and testing of the sludges that are incorporated into Tenneco's land using land-farming techniques and of the liquid wastes and plant scraps that are burned in plant boilers to determine if the substances are regulated under the Resource Conservation and Recovery Act.

In May 1984, DHMH conducted another site inspection of the facility to collect groundwater and soil samples (*Site Inspection of Tenneco Chemicals, Incorporated*, 1986). The site was owned by Nu-Dex at the time. The sample results revealed the presence of heavy metals in on-site monitoring wells. The report concluded the source(s) of contamination had not been identified.

In January 1989, a closure plan for Impoundment 314 was submitted to the Maryland Department of the Environment's (MDE) Groundwater/ Underground Injection Control Permits Division by Huls America Inc. and an addendum to the plan was submitted in April 1989. On May 2, 1989, MDE approved the plan and its addendum subject to a sludge-removal schedule, bioremediation installation schedule, and groundwater monitoring requirements. The groundwater monitoring required (1) quarterly monitoring and reporting until achievement of the remediation goal of 700 parts per billion (ppb) or less phthalates in five groundwater monitoring wells for two consecutive quarters, (2) a final report, and (3) quarterly post-closure monitoring and reporting for one year.

In February 1999, the Kent County Sanitary District asked MDE's Water Management Administration, Water Supply Program, for information on the groundwater contamination at the Velsicol property. MDE reviewed the data and concluded the site does not present a risk to the Sanitary District's Worton Water System. In March 1999, MDE noted that the level of phthalates permitted in drinking water had been reduced to 6 ppb.

Current Status

This site is on the State Master List that identifies potential hazardous waste sites in Maryland. The Master List includes sites currently identified by EPA's Comprehensive Environmental Response Compensation and Liability Information System. EPA has given the site a designation of No Further Remedial Action Planned (NFRAP). The designation of NFRAP by EPA does not mean that MDE has reached the same conclusion concerning further investigation at the site. The information contained in the fact sheet presents a summary of past investigations and site conditions currently known to MDE.

Facility Contacts

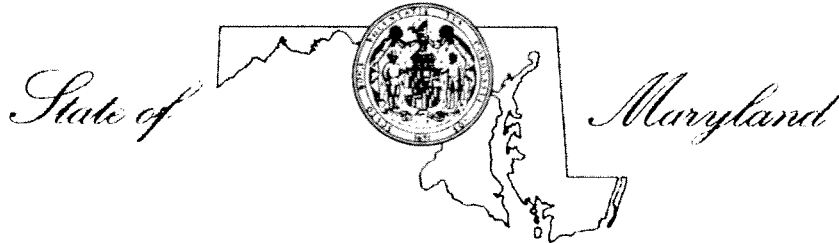
Arthur O'Connell, Chief, Site and Brownfields Assessments/State Superfund Division
Maryland Department of the Environment
410-631-3493

August 9, 2007

Construction Permit

KEEP PERMIT AT SITE

CONTROL NO. B-01479



Martin O' Malley
Governor

Shari T. Wilson
Secretary

DEPARTMENT OF THE ENVIRONMENT

Air and Radiation Management Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

☒ Construction Permit

☐ Operating Permit

PERMIT NO. 029-7-0018 M

DATE ISSUED August 9, 2007

PERMIT FEE \$1,000.00 (PAID)

EXPIRATION DATE In accordance with
COMAR 26.11.02.04B

LEGAL OWNER & ADDRESS

Velsicol Chemical Corporation
10380 Worton Road
Chestertown MD 21620
Attn: Ms. Joanne Szymanski, EHS Manager

SITE

SAME
KENT County
Premises #0001
AI# - 2107

SOURCE DESCRIPTION

This permit authorizes installation of one (1) Benzolfex® 352 ester flaking and packaging unit in the facility's existing plasticizer (ester) manufacturing plant as registered under ARMA registration number 7-0018.

This permit is issued in conjunction with permit-to-construct 029-7-0018 M issued October 31, 2006 as part of a facility-wide permit-to-construct for premises number 029-00001.

This source is subject to the conditions described on the attached pages.

Page 1 of 5

Program Manager

Director, Air and Radiation Management Administration

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-CONSTRUCT CONDITIONS
PERMIT NO. 029 – 7 – 0018M**

- (1) The following Air and Radiation Management Administration (ARMA) permit-to-construct applications are incorporated into this permit by reference:
- (a) Application for Processing or Manufacturing Equipment (Form 5) received at the Department June 27, 2007 and pertaining to a Benzoflex® 352 ester flaking and packaging unit.
 - (b) Application for Gas Cleaning or Emission Control Equipment (Form 6) received at the Department June 27, 2007 and pertaining to a dust collector that would be used to control particulate emissions from a Benzoflex® 352 ester flaking and packaging unit.
 - (c) Summary of Demonstrations for Meeting the Ambient Impact Requirement and T-BACT Requirements (Form 5A) received at the Department July 16, 2007.
 - (d) Emissions Data (Form 5B) received at the Department July 16, 2007.

If there are any conflicts between representations in this permit and representations in the applications, the representations in the permit shall govern. Estimates of dimensions, volumes, emissions rates, operating rates, feed rates and hours of operation included in the applications do not constitute enforceable numeric limits beyond the extent necessary for compliance with applicable requirements.

- (2) Upon presentation of credentials, representatives of the Maryland Department of the Environment ("MDE" or the "Department") and the Kent County Health Department (or Baltimore County Department of Environmental Protection & Resource Management or Montgomery County Department of Environmental Protection) shall at any reasonable time be granted, without delay and without prior notification, access to the Permittee's property and permitted to:
- (a) inspect any construction authorized by this permit;
 - (b) sample, as necessary to determine compliance with requirements of this permit, any materials stored or processed on-site, any waste materials, and any discharge into the environment;
 - (c) inspect any monitoring equipment required by this permit;
 - (d) review and copy any records, including all documents required to be maintained by this permit, relevant to a determination of compliance with requirements of this permit; and

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-CONSTRUCT CONDITIONS
PERMIT NO. 029 – 7 – 0018M**

- (e) obtain any photographic documentation or evidence necessary to determine compliance with the requirements of this permit.
- (3) The Permittee shall notify the Department prior to increasing quantities and/or changing the types of any materials referenced in the application or limited by this permit. If the Department determines that such increases or changes constitute a modification, the Permittee shall obtain a permit-to-construct prior to implementing the modification.
- (4) Nothing in this permit authorizes the violation of any rule or regulation or the creation of a nuisance or air pollution.
- (5) If any provision of this permit is declared by proper authority to be invalid, the remaining provisions of the permit shall remain in effect.
- (6) This permit is issued in conjunction with permit-to-construct number 029 – 7 – 0018 issued October 31, 2006 as part of a facility-wide permit-to-construct for premises number 029 – 00001.
- (7) Subsequent to issuance of this permit, the Department may impose additional and modified requirements that are incorporated into a State permit-to-operate issued pursuant to COMAR 26.11.02.13.
- (8) This source is subject to all applicable federal air pollution control requirements.
- (9) This source is subject to all applicable federally enforceable state air pollution control requirements including, but not limited to, the following regulations:
 - (a) COMAR 26.11.01.07C, which requires that the Permittee report to the Department occurrences of excess emissions.
 - (b) COMAR 26.11.02.09A, which requires that the Permittee obtain a permit-to-construct if an installation is to be modified in a manner that will cause changes in the quantity, nature, or characteristics of emissions from the installation as referenced in this permit.
 - (c) COMAR 26.11.06.02C(1), which limits visible emissions other than uncombined water to not more than 20 percent opacity.
 - (d) COMAR 26.11.06.03B(1), which limits the concentration of particulate matter in any exhaust gases to not more than 0.05 grains per standard cubic foot of dry exhaust gas.

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-CONSTRUCT CONDITIONS
PERMIT NO. 029 – 7 – 0018M**

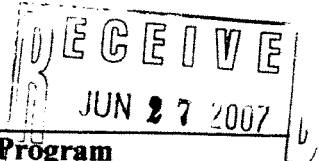
- (e) COMAR 26.11.19.30, which requires that the Permittee control emissions of VOC from affected organic and inorganic chemical production operations.
 - (f) COMAR 26.11.19.02I, which requires that the Permittee establish in writing and implement facility-wide "good operating practices" designed to minimize emissions of VOC.
 - (g) COMAR 26.11.19.16, which requires that the Permittee implement a VOC leak detection and repair program designed to minimize unintended emissions of VOC from process equipment and components, e.g., in-process vessels, storage tanks, pumps, compressors, valves, flanges and other pipeline fittings, pressure relief valves, process drains, and open-ended pipes.
- (10) This source is subject to all applicable State-only enforceable air pollution control requirements including, but not limited to, the following regulations:
- (a) COMAR 26.11.02.13A(16), which requires that the Permittee obtain from the Department, and maintain and renew as required, a valid State permit-to-operate.
 - (b) COMAR 26.11.02.19C & D, which require that the Permittee submit to the Department annual certifications of emissions, and that the Permittee maintain sufficient records to support the emissions information presented in the submittals.
 - (c) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
 - (d) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.
 - (e) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health.

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-CONSTRUCT CONDITIONS
PERMIT NO. 029 – 7 – 0018M**

- (11) This permit authorizes the Permittee to install one (1) Benzoflex® 352 (B352) ester flaking and packaging unit that includes a dust collector designed to reduce the concentration of particulate matter in the process exhaust gases to not more than 0.05 grains/scfd before discharge to atmosphere. The new unit shall be considered a modification to the Permittee's existing esterification process as registered under ARMA registration number 7-0018.
- (12) Except as otherwise provided in this permit, the B352 ester flaking and packaging unit authorized by this permit shall be constructed and operated in accordance with specifications included in the incorporated applications and with recommendations of vendors unless the Permittee obtains from the Department written authorization for alternative construction and operation.
- (13) The Permittee shall report, in accordance with requirements under COMAR 26.11.01.07, occurrences of excess emissions to the Compliance Program of the Air and Radiation Management Administration.

MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Blvd • Baltimore, Maryland 21230
(410) 537-3230 • 1-800-633-6101 • www.mde.state.md.us



Air and Radiation Management Administration • Air Quality Permits Program

APPLICATION FOR PROCESSING/MANUFACTURING EQUIPMENT

Permit to Construct ☒

Registration Update ☐

Initial Registration ☐

1A. Owner of Equipment/Company Name

Velsicol Chemical Corporation

Mailing Address

10380 Worton Rd.

Street Address

Chestertown

Maryland

21620

City

State

Zip

Telephone Number

(410) 778-1991

Signature

Dale R. Clark

Dale R. Clark, Plant Manager

Print Name and Title

6/25/07

Date

DO NOT WRITE IN THIS BLOCK 2. REGISTRATION NUMBER

County No.

029

1-2

Premises No.

0001

3-6

Registration Class Equipment No.

7

7

0018

8-11

Data Year

07

12-13

Application Date

1B. Equipment Location and Telephone Number (if different from above)

Same as above

Street Number and Street Name

City/Town

State

Zip

()

Telephone Number

Premises Name (if different from above)

3. Status (A= New, B= Modification to Existing Equipment, C= Existing Equipment)

Status

A

15

New Construction
Begun (MM/YY)

16-19

New Construction
Completed (MM/YY)

20-23

Existing Initial
Operation (MM/YY)

20-23

4. Describe this Equipment: Make, Model, Features, Manufacturer (Include Maximum Hourly Input Rate, etc.)

B352 Flaker - flaking and packaging of 352 ester

5. Workmen's Compensation Coverage

WC 521-28-81

July 1, 2007

Binder/Policy Number

Expiration Date

Company National Union Fire Insurance Company of Pittsburgh

NOTE: Before a Permit to Construct may be issued by the Department, the applicant must provide the Department with proof of worker's compensation coverage as required under Section 1-202 of the Worker's Compensation Act.

6A. Number of Pieces of Identical Equipment Units to be Registered/Permitted at this Time

1

6B. Number of Stack/Emission Points Associated with this Equipment

1

Form Number: 5

Rev. 9/27/2002

TTY Users 1-800-735-2258



7. Person Installing this Equipment (if different from Number 1 on Page 1)

Name _____ Title _____
Company Collet and Sons, Inc.
Mailing Address/Street 550 Green Giant Rd.
City/Town Townsend State Delaware Telephone (303) 376-1842

8. Major Activity, Product or Service of Company at this Location

Manufacturing of a variety of specialty plasticizers, including Admex® polymerics and Benzoflex® plasticizers.

9. Control Devices Associated with this Equipment

None
☐ 24-0

Simple/Multiple Cyclone <input type="checkbox"/> 24-1	Spray/Adsorb Tower <input type="checkbox"/> 24-2	Venturi Scrubber <input type="checkbox"/> 24-3	Carbon Adsorber <input type="checkbox"/> 24-4	Electrostatic Precipitator <input type="checkbox"/> 24-5	Baghouse <input checked="" type="checkbox"/> 24-6	Thermal/Catalytic Afterburner <input type="checkbox"/> 24-7	Dry Scrubber <input type="checkbox"/> 24-8
--	---	---	--	---	---	--	---

Other

☐ Describe _____
24-9

10. Annual Fuel Consumption for this Equipment

OIL-1000 GALLONS <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 26-31	SULFUR % <input type="text"/> <input type="text"/> 32-33	GRADE <input type="text"/> 34	NATURAL GAS-1000 FT ³ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 35-41	LP GAS-100 GALLONS <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 42-45	GRADE <input type="text"/> 46-47
COAL- TONS <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 48-52	SULFUR % <input type="text"/> <input type="text"/> 53-55	ASH% <input type="text"/> <input type="text"/> 56-58	WOOD-TONS <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 59-63	MOISTURE % <input type="text"/> <input type="text"/> 64-65	

OTHER FUELS ☐ ANNUAL AMOUNT CONSUMED (Specify Units of Measure) 66-1
OTHER FUEL ☐ ANNUAL AMOUNT CONSUMED (Specify Units of Measure) 66-2
1= Coke 2= COG 3=BFG 4=Other

11. Operating Schedule (for this Equipment)

Continuous Operation <input checked="" type="checkbox"/> 67-1	Batch Process <input type="checkbox"/> 67-2	Hours per Batch <input type="text"/> <input type="text"/> 68-69	Batch per Week <input type="text"/> 70-71	Hours per Day <input type="text"/> 72	Days Per Week <input type="text"/> 73-75	Days per Year <input type="text"/> 76-77
(Total Seasons= 100%)						
Seasonal Variation in Operation: No Variation <input checked="" type="checkbox"/> 78	Winter Percent <input type="text"/> <input type="text"/> 79-80	Spring Percent <input type="text"/> <input type="text"/> 81-82	Summer Percent <input type="text"/> <input type="text"/> 83-84	Fall Percent <input type="text"/> <input type="text"/> 85-86		



12. Equivalent Stack Information - is Exhaust through Doors, Windows, etc. Only? (Y/N)

N

85

If not, then

Height Above Ground (FT)

		10
--	--	----

86-88

Inside Diameter at Top

2' by 2'

89-91

Exit Temperature (°F)

Ambient

92-95

Exit Velocity (FT/SEC)

8.33

96-98

NOTE:

Attach a block diagram of process/process line, indicating new equipment as reported on this form and all existing equipment, including control devices and emission points.

13. Input Materials (for this equipment only)

Is any of this data to be considered confidential? ☒ Y (Y or N)

	NAME	CAS NO. (IF APPLICABLE)	PER HOUR	INPUT RATE		UNITS
				UNITS	PER YEAR	
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						

TOTAL

14. Output Materials (for this equipment)

Process/Product Stream

	NAME	CAS NO. (IF APPLICABLE)	PER HOUR	OUTPUT RATE		UNITS
				UNITS	PER YEAR	
1.	Same as input					
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						

TOTAL

15. Waste Streams - Solid and Liquid

	NAME	CAS NO. (IF APPLICABLE)	PER HOUR	OUTPUT RATE		UNITS
				UNITS	PER YEAR	
1.	None					
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						

TOTAL



16. Total Stack Emissions (for this equipment only) in Pounds Per Operating Day

Particulate Matter 0.168 99-104	Oxides of Sulfur 0 105-110	Oxides of Nitrogen 0 111-116
Carbon Monoxide 0 177-122	Volatile Organic Compounds 0 123-128	PM-10 0 129-134

17. Total Fugitive Emissions (for this equipment only) in Pounds Per Operating Day

Particulate Matter 0 135-139	Oxides of Sulfur 0 140-144	Oxides of Nitrogen 0 145-149
Carbon Monoxide 0 150-154	Volatile Organic Compounds 0 155-159	PM-10 0 160-164

Method Used to Determine Emissions (1= Estimate 2= Emission Factor 3= Stack Test 4= Other)

TSP 1 165	SOX 166	NOX 167	CO 168	VOC 169	PM10 170
-----------------	----------------	----------------	---------------	----------------	-----------------

AIR AND RADIATION MANAGEMENT ADMINISTRATION USE ONLY

18. Date Rec'd. Local _____	Date Rec'd. State <u>June 27, 2007</u>	Return to Local Jurisdiction Date _____ By _____
Reviewed by Local Jurisdiction Date _____ By _____	Reviewed by State Date <u>7/2/07</u> By <u>RA Oliver</u>	tons product

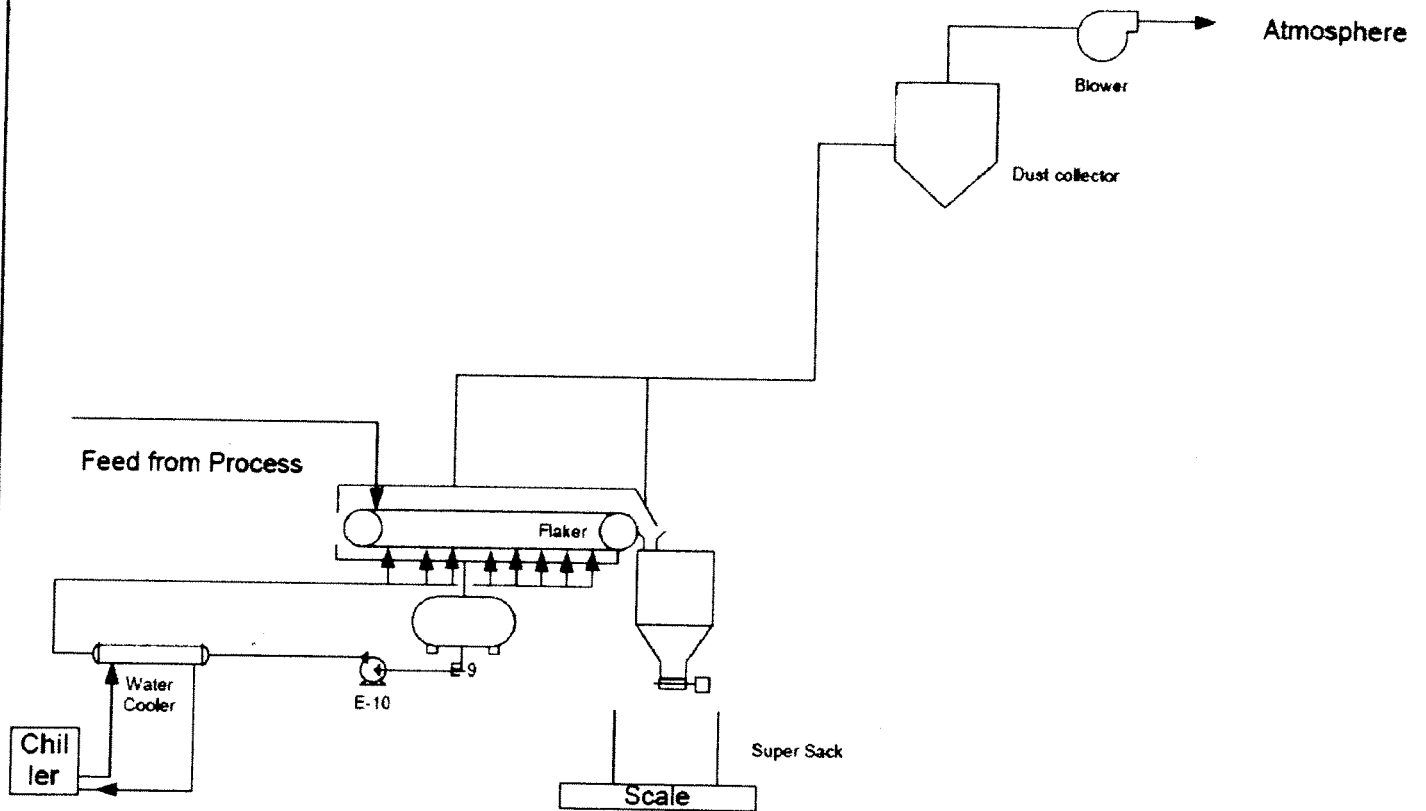
19. Inventory Date Month/Year _____ 171-174	Equipment Code <u>287</u> 175-177	SCC Code <u>30199999</u> 178-185
--	---	--

20. Annual Operating Rate <u>28000</u> 186-192	Maximum Design Hourly Rate <u>4.45</u> 193-199	Permit to Operate Month _____ 200-201	Transaction Date (MM/DD/YR) _____ 202-207
---	---	--	--

Staff Code _____ 208-210	VOC Code _____ 211 212	SIP Code _____ 213 214	Regulation Code _____ 215-218	Confidentiality <u>N</u> 219
--------------------------------	------------------------------	------------------------------	-------------------------------------	------------------------------------

Point Description <u>B352 FLAKER</u> 220-238	Action <u>C</u> 239
--	---------------------------

15. Show Location of Dust Cleaning Equipment in the System. Draw or Sketch Flow Diagram Showing Emission Path from Source to Exhaust Point to Atmosphere.



Date Received: Local _____ State _____

Acknowledgement Date: _____

By _____

Reviewed By:

Local _____

State R. Oliver, July 2007

Returned to Local:

Date _____

By _____

Application Returned to Applicant:

Date _____

By _____

REGISTRATION NUMBER OF ASSOCIATED EQUIPMENT:

7 0018

PREMISES NUMBER:

029 0001

Emission Calculations Revised By _____ Date _____

MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Blvd • Baltimore, Maryland 21230
(410) 537-3230 • 1-800-633-6101 • www.mde.state.md.us

JUL 16 2007

Air and Radiation Management Administration • Air Quality Permits Program

Summary of Demonstrations for Meeting the ambient impact Requirement (26.11.15.05) and the T-Bact Requirement (26.11.15.06)

DO NOT WRITE IN THIS SPACE

Company Name Velsicol Chemical Corporation

1. Summary of T-BACT Demonstration: List all emission reduction options considered in determining T-BACT starting with the option that reduces emissions the most. Supporting documentation **must** be attached.

<u>Emission Reduction Option</u>	<u>% Emission Reduction</u>	<u>COSTS</u>	
		<u>Capital</u>	<u>Annual Operating</u>
1. Baghouse	99.9	\$16,000	\$20,000
2.			
3.			
4.			
5.			

2. Identify the emission reduction option selected as T-BACT and briefly explain why this is the best selection. Supporting documentation **must** be attached.

The baghouse was selected based on the particulate emission reduction efficiency of greater than 99.9%.



3. List screening levels and highest estimated off-site concentrations ($\mu\text{g}/\text{m}^3$) resulting from **premises-wide allowable emissions** (1) of each Toxic Air Pollutant that is covered by the regulations and discharged from the installation or source applying for the permit. See the General Instructions for more detail. Supporting documentation **must** be attached.

Toxic Air Pollutant	CAS Number	SCREENING LEVEL(S)			OFF-SITE CONCENTRATIONS		
		1-HR	8-HR	Annual	1-HR	8-HR	Annual
1 N/A							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

☐

If unable to use a Screening Analysis, check the box and attach the Second Tier Analysis or Special Permit request to this form.

- (1) **Premises** is defined as: "all the installations or other sources that are located on contiguous or adjacent properties and that are under the control of one person or under common control of a group of persons" (COMAR 26.11.15.01B(12)).

Allowable Emissions are defined as: "the maximum emissions a source or installation is capable of discharging after consideration of any physical or operational limitations required by this subtitle or by enforceable conditions included in an applicable air quality permit to construct, permit to operate, secretarial order, plan for compliance, consent agreement, or court order" (COMAR 26.11.15.01B(2)).



JUL 16 2007

Air and Radiation Management Administration • Air Quality Permits Program

Fill out one Form 5B for each stack or other emission point subject to the regulations (see the General Instructions for more detail).

[illegible]

Company Name Velsicol Chemical Corporation

Form Number: 5B
Revision Date: 09/27/2002
TTY Users 1-800-735-2258



6. Criteria Pollutant Emissions (attach supporting documentation)

ESTIMATED EMISSIONS			
Criteria Pollutants	Design Capacity (lb/hr)	Projected (lb/hr)	Operations (1) (ton/year)
Particulate Matter	0.007	0.007	0.003
PM10			
Oxides of Sulfur			
Oxides of Nitrogen			
Carbon Monoxide			
VOC (total)			
Lead			

7. Toxic Air Pollutant Emissions (attach supporting documentation)

ESTIMATED EMISSIONS						
Toxic Air Pollutant (list all)	CAS Number	Design Capacity	Projected Operations (1)		Used for Form 5A, Part 3 (2)	
		(lb/hr)	(lb/hour)	(ton/year)	(lb/hour)	(ton/year)
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						

(1) Based on the emission schedule reported in Block three of this form.

(2) This column must be filled in with the emission estimates used to demonstrate compliance with the regulations. If continuous emissions at design capacity allow you to demonstrate compliance with all air pollution regulations, then these emissions should be listed here. If the air toxic regulations or any other regulations require you to discharge less than continuously at design capacity, then these emissions should be listed here.



0 150 300
SCALE IN FEET



VELSICOL CHEMICAL CORPORATION
CHESTERTOWN, MARYLAND

**FACILITY PLOT PLAN
SHOWING B352
FLAKER LOCATION**



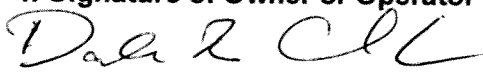
MD ROUTE 297

MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Blvd ▪ Baltimore, Maryland 21230
(410) 537-3230 ▪ 1-800-633-6101 ▪ www.mde.state.md.us

Air and Radiation Management Administration ▪ Air Quality Permits Program

Application for Permit to Construct Gas Cleaning or Emission Control Equipment

1. Owner of Installation Velsicol Chemical Corporation		Telephone No. (410) 778-1991		Date of Application	
2. Mailing Address 10380 Worton Rd.		City Chestertown	Zip Code 21620	County Kent	
3. Equipment Location Same as above		City/Town or P.O.		County	
4. Signature of Owner or Operator 		Title Plant Manager		Print or Type Name Dale R. Clark	
5. Application Type:		Alteration <input type="checkbox"/>		New Construction <input checked="" type="checkbox"/>	
6. Date Construction is to Start: July 2007			Completion Date (Estimate): August 2007		
7. Type of Gas Cleaning or Emission Control Equipment:					
Simple Cyclone <input type="checkbox"/> Multiple Cyclone <input type="checkbox"/> Afterburner <input type="checkbox"/> Electrostatic Precipitator <input type="checkbox"/>					
Scrubber <input type="checkbox"/> _____ (type) Other <input checked="" type="checkbox"/> Baghouse _____ (type)					
8. Gas Cleaning Equipment Manufacturer Unknown		Model No.		Collection Efficiency (Design Criteria) 99.9%	
9. Type of Equipment which Control Equipment is to Service: B352 Flaker					
10. Stack Test to be Conducted:					
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> _____ (Stack Test to be Conducted By) _____ (Date)					
11. Cost of Equipment \$16,000					
Estimated Erection Cost \$10,000					



12. The Following Shall Be Design Criteria:

	<u>INLET</u>		<u>OUTLET</u>
Gas Flow Rate	2,000	ACFM*	2,000
Gas Temperature	Ambient	°F	Ambient
Gas Pressure	5	INCHES W.G.	0
		PRESSURE DROP	5 INCHES W.G.
Dust Loading	0.408	GRAINS/ACFD**	0.0004
Moisture Content	50	%	50
OR			
Wet Bulb Temperature		°F	
Liquid Flow Rate		GALLONS/MINUTE	
(Wet Scrubber)			
(WHEN SCRUBBER LIQUID OTHER THAN WATER INDICATE COMPOSITION OF SCRUBBING MEDIUM IN WEIGHT %)			
*= ACTUAL CUBIC FEET PER MINUTE		**= ACTUAL CUBIC FEET DRY	

WHEN APPLICATION INVOLVES THE REDUCTION OF GASEOUS POLLUTANTS, PROVIDE THE CONCENTRATION OF EACH POLLUTANT IN THE GAS STREAM IN VOLUME PERCENT. INCLUDE THE COMPOSITION OF THE GASES ENTERING THE CLEANING DEVICE AND THE COMPOSITION OF EXHAUSTED GASES BEING DISCHARGED INTO THE ATMOSPHERE. USE AVAILABLE SPACE IN ITEM 15 ON PAGE 3.

13. Particle Size Analysis

<u>Size of Dust Particles Entering Cleaning Unit</u>	<u>% of Total Dust</u>	<u>% to be Collected</u>
0 to 10 Microns	0	NA
10 to 44 Microns	1%	99.9%
Larger than 44 Microns	99%	99.9%

14. For Afterburner Construction Only:

Volume of Contaminated Air _____ CFM (DO NOT INCLUDE COMBUSTION AIR)

Gas Inlet Temperature _____ °F

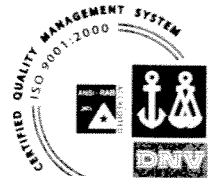
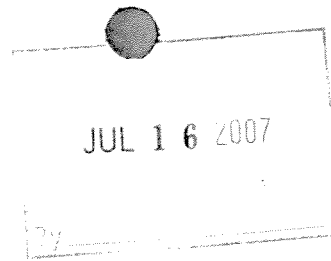
Capacity of Afterburner _____ BTU/HR

Diameter (or area) of Afterburner Throat _____

Combustion Chamber _____ (diameter) _____ (length) Operating Temperature at Afterburner _____ °F

Retention Time of Gases _____





July 11, 2007

Ross Oliver
Maryland Department of the Environment
Air and Radiation Management Administration
1800 Washington Blvd.
Baltimore, MD 21230

Dear Ross:

Please find the enclosed Forms 5A and 5B to complete the application for the Permit to Construct for the Benzoflex 352 flaking equipment.

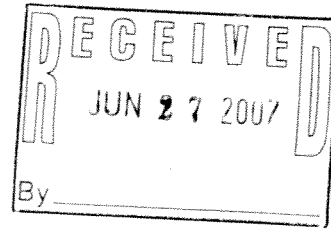
If you have any questions regarding this submission, please call me at 410-778-1991, x252.

Sincerely yours,

A handwritten signature in cursive script that reads 'Joanne K. Szymanski'.

Joanne K. Szymanski
EHS Manager





June 25, 2007

Ross Oliver
Maryland Department of the Environment
Air and Radiation Management Administration
1800 Washington Blvd.
Baltimore, MD 21230

Dear Ross:

Please find the enclosed Form 5 for the Benzoflex 352 flaking equipment and Form 6 for the associated Dust Collector (baghouse).

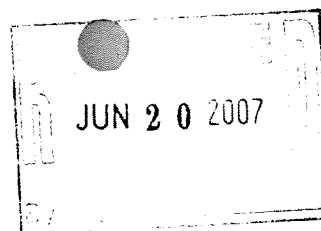
If you have any questions regarding this submission, please call me at 410-778-1991, x252.

Sincerely yours,

A handwritten signature in cursive script that reads 'Joanne K. Szymanski'.

Joanne K. Szymanski
EHS Manager





June 14, 2007

Mr. Ross Oliver
Maryland Department of the Environment
Air and Radiation Administration
1800 Washington Blvd.
Baltimore, MD 21230

Dear Ross,

As discussed with you last week, the Velsicol Chestertown, MD plant has elected to manufacture a [REDACTED], which was previously manufactured at the recently closed Velsicol Chemical Corporation Chattanooga facility. A six to twelve month inventory of [REDACTED] was produced at the Chattanooga facility prior to its shutdown. A 3-month search to locate a toller to manufacture the [REDACTED] for Velsicol was unsuccessful, and coupled with a decline in inventory, Velsicol has decided to manufacture [REDACTED] at Chestertown.

The change to manufacture [REDACTED] at Chestertown will consist of two phases, the first of which will include the manufacture of [REDACTED]. The second phase will consist of moving the flaker and dust collector from Velsicol's Chattanooga plant to Chestertown in the early fall of 2007 to produce the product in solid form. This letter serves as a notification to the department and a request for approval of the manufacture of [REDACTED] beginning with a trial batch at the end of June 2007. The [REDACTED] will be shipped to an external site for flaking. We also request the department's determination for permitting requirements for the installation of the flaker and dust collector.

The projected annual volume for [REDACTED]. The process for the manufacture of [REDACTED] includes existing raw materials, [REDACTED] and the introduction of a new raw material, [REDACTED]. This would take place in the existing processing equipment covered by operating permit # 029-00001 (MDE Registration # 029-7-0018). [REDACTED] will be used as reactants. The new raw material [REDACTED] will be charged directly from the truck to the reaction vessel. Toluene will be used as a processing aid and recovered and transferred to a storage tank (T-604 which was previously used for methanol storage) until the next batch [REDACTED] is manufactured. This toluene stored in T-604 will then be reused in subsequent [REDACTED] processes. We do not believe that the change of storage service for T-604 constitutes a modification that requires a permit-to-construct since the tank does not require any physical modification to accommodate the change of service to toluene.

The projected volume of [REDACTED] expected to be manufactured in 2007 at the Chestertown Plant is approx. [REDACTED] as described in a letter dated February 9, 2007. With the additional [REDACTED] plasticizer volume of [REDACTED], we believe that the facility's Air Toxics Compliance Demonstration completed by the Sapphire Group, Inc. in 1999 will still be valid for benzoic acid and toluene as the demonstration was conservatively based on 1998 production volumes plus an additional 50%, or 72MM lbs. Emissions from other sources (tanks and wastewater plant) are not

expected to increase as emissions from these sources were estimated based on continuous operation.

Velsicol Chemical Corporation's Chestertown Plant plan to add [REDACTED] the existing Ester Manufacturing Plant (MDE Registration #029-7-0018) requires the use of [REDACTED], a Toxic Air Pollutant, which is not currently included in the facility's air quality permits and registrations. The table below demonstrates compliance with the Maryland Department of the Environment's Air Toxics Regulations. The methodology for estimating the process emissions is the same as used for the Sapphire Group's 1998 Air Toxics Compliance Demonstration mentioned previously. The estimated annual emissions of 0.00004 lbs. /hr. are well below the AER of 0.04 lbs/hr.

Estimated Additional Emissions (lbs/yr) for [REDACTED]								
	Process		Tank	Truck (Fugitive) (lbs/yr)	Total (lbs./yr)	Lbs/hr	Screening Level (ug/m3)	AER (lbs/hr)
	Uncontrolled (lbs/yr)	Controlled (lbs/yr)						
[REDACTED]	0.10	0.04	NA	0.22	0.36	4.11E-05	22.4	0.04

The addition of [REDACTED] to the facility's manufacturing schedule is not expected to result in a change of the facility's synthetic minor status.

We request that the department review the information supplied in this letter and provide approvals and guidance as follows:

- Approval for the manufacture of a trial batch of [REDACTED] during the final week of June 2007
- Approval for use of T-604 (12000 gallon tank) for storage of recycled toluene commencing the final week of June 2007 and applicability to 40 CFR 60, Subpart Kb and the continued use of T-604 carbon adsorption system already installed on the tank (which was previously used for methanol storage)
- Approval for the continued manufacture of [REDACTED]
- Permit requirements for installation of flaker and dust collector for flaking [REDACTED]

Please let me know if you require any additional information or have any questions. We appreciate your assistance and guidance and look forward to your response.

Sincerely,



Joanne K. Szymanski
Environmental Health and Safety Manager

Cc: Gregory Franzoni, Sr., Maryland Department of the Environment, Air Quality Compliance Program, Baltimore, MD
Dale Clark, Velsicol Chemical Corporation, Plant Manager, Chestertown, MD



MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard • Baltimore Maryland 21230
(410) 537-3000 • 1-800-633-6101 • <http://www.mde.state.md.us>

Martin O'Malley
Governor

Shari T. Wilson
Secretary

Anthony G. Brown
Lt. Governor

Robert M. Summers, Ph.D.
Deputy Secretary

TO: File, Velsicol Chemical Corporation (029 – 00001)
FROM: ^{RAO} Ross Oliver, ARMA Permits Program
DATE: August 7, 2007
SUBJECT: Permit-to-construct for one (1) ester flaking and packaging unit

Velsicol has begun producing new ester Benzoflex® 352 (B352) at the company's Chestertown, Maryland facility. This particular ester was formerly produced at the company's now closed Chattanooga, Tennessee plant. The B352 currently being produced at the Chestertown facility is shipped off-site in a molten state, but the company wishes to install a flaking unit that would allow the facility to solidify the material and then convert it to a flaked form before packaging and shipping. Particulate emissions from the proposed flaking unit would be controlled by a dust collector that is expected to reduce particulate concentration in exhaust gases to about 0.0004 grains per scfd, which is below the applicable standard of 0.05 grains per scfd. If the concentration of particulate in the exhaust gases was at 0.05 grains per scfd, emissions would be approximately 0.25 lbs per hour, which would be less than the allowed emissions rate for compliance with air toxics regulations as determined in accordance with the formulae used to determine the values in the table found under COMAR 26.11.16.02A(2).

This is a simple permit that would constitute a modification to the Velsicol facility's existing ester manufacturing plant as registered under ARMA registration number 7 – 0018. The permit has no unusual conditions, and would be issued in conjunction with the most recent superseding permit-to-construct issued for the ester manufacturing plant.

"Together We Can Clean Up"

September 10, 2007

Correspondence Regarding Permit Comments

From: John McGillen
To: Michael Richardson
Date: 9/10/2007 3:09:06 PM
Subject: Re: Velsicol - the 3 items highlighted in your response

Michael,

BEHP monitoring: The existing and proposed permit contain the following language:

"All operating wells shall be sampled at the frequencies specified in the attached schedule for the following: total organic carbon, chemical oxygen demand, toxic organics, and pH. The toxic organic test shall consist of the volatile and base/neutral fractions. In addition, the permittee shall measure the water level of all operating wells once per month. The above results and measurement shall be submitted to the Department as per General Condition A.2."

Therefore, they are already being monitored for BEHP and this monitoring includes MW9, MW15 and MW16. It would probably be useful to avoid any misunderstanding to clarify that the 'operating wells' include the wells of interest to the drying beds. Per Velsicol, this list includes monitoring wells 5 and 7 through 20.

BEHP < 6 ppb: I am confused by what you are proposing since it is not clear to me if you are saying drying bed use should stop now and only continue after one years of monitoring results. There are years of data, although the frequency is not quarterly in all cases but annually or semi-annually. I have requested that they send me the latest four results for BEHP for wells 9, 15 and 16.

submittal of a remediation plan: A remediation plan was submitted in April 2005 and is titled Groundwater Remediation Plan. The question seems to be, is this remediation plan sufficient in the opinion of the Compliance Program. It doesn't seem to have been rejected by Tien but I am under the impression it is not acceptable to the Compliance Program (otherwise, why would they be doing an enforcement action?).

John

>>> Michael Richardson 09/07/07 8:49 PM >>>
John,

Please see the attached. In particular I need you to follow up on the highlighted text. We need to resolve these issues and get this information before we update the draft and hopefully have Stone sign-off on it.

Thanks,

Michael Richardson, Acting Chief
Industrial Discharge Permits Division
Wastewater Permits Program
Water Management Administration
Maryland Department of the Environment
Email: mrichardson@mde.state.md.us
Voice: 410-537-3323
Fax: 410-537-3163

>>> John McGillen 09/06/07 6:59 AM >>>
Michael,

Joanne Symanski from Velsicol called to ask if we can give them an update on what we are doing iwth the draft permit. Can we tell her anything about our decision on the sludge drying bed prohibition?

Also, we had discussed with them having a 3-way meeting with the Chester River Association. They were agreeable to this but wanted to understand our position on the sludge drying beds first. Therefore, this tentative meeting is on hold until we give them some feedback on this issue.

John

November 28, 2007

Velsicol Internal Meeting Minutes

ATTORNEY-CLIENT COMMUNICATION
LITIGATION WORK PRODUCT
PRIVILEGED & CONFIDENTIAL

VELSICOL INTERNAL MEETING
11/28/07

Case Status

Complaint served
Motion to Intervene Filed
Answer to Complaint due Dec. 5

PIA Requests (Clinic, Velsicol)

Status of their response to Oct. 25 Inspec. Rpt.

Motion to Intervene

What It Says
Legal Merits
Options for Response
Recommendation of WMA to Secretary

60-day Notice Letter

Site Visit--Sampling Plan

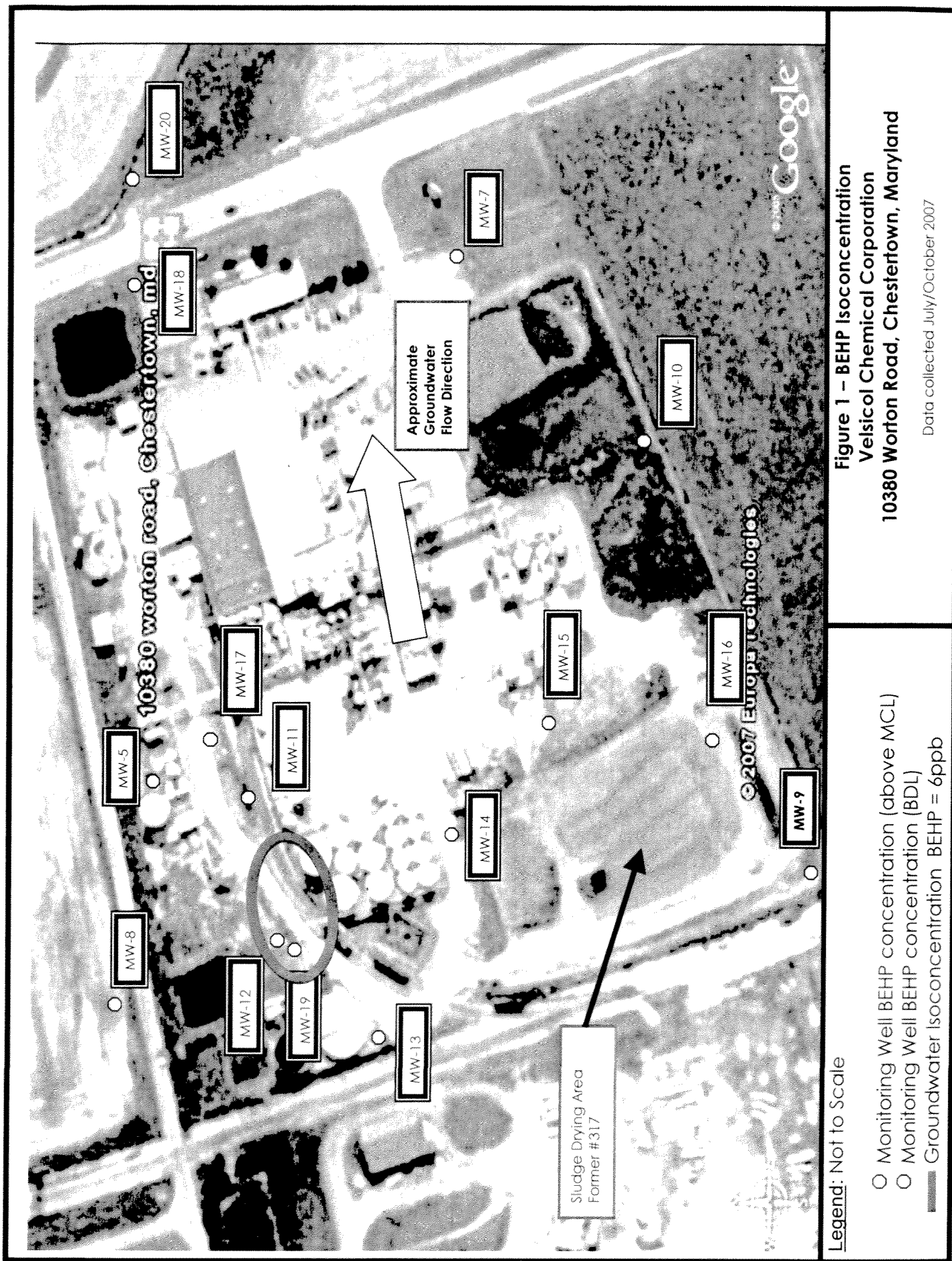
Discovery

Interrogs
Requests for Production of Documents

Friday's Meeting

What do we want in a settlement

What do we want to tell them about how we will respond to the motion and 60-day notice



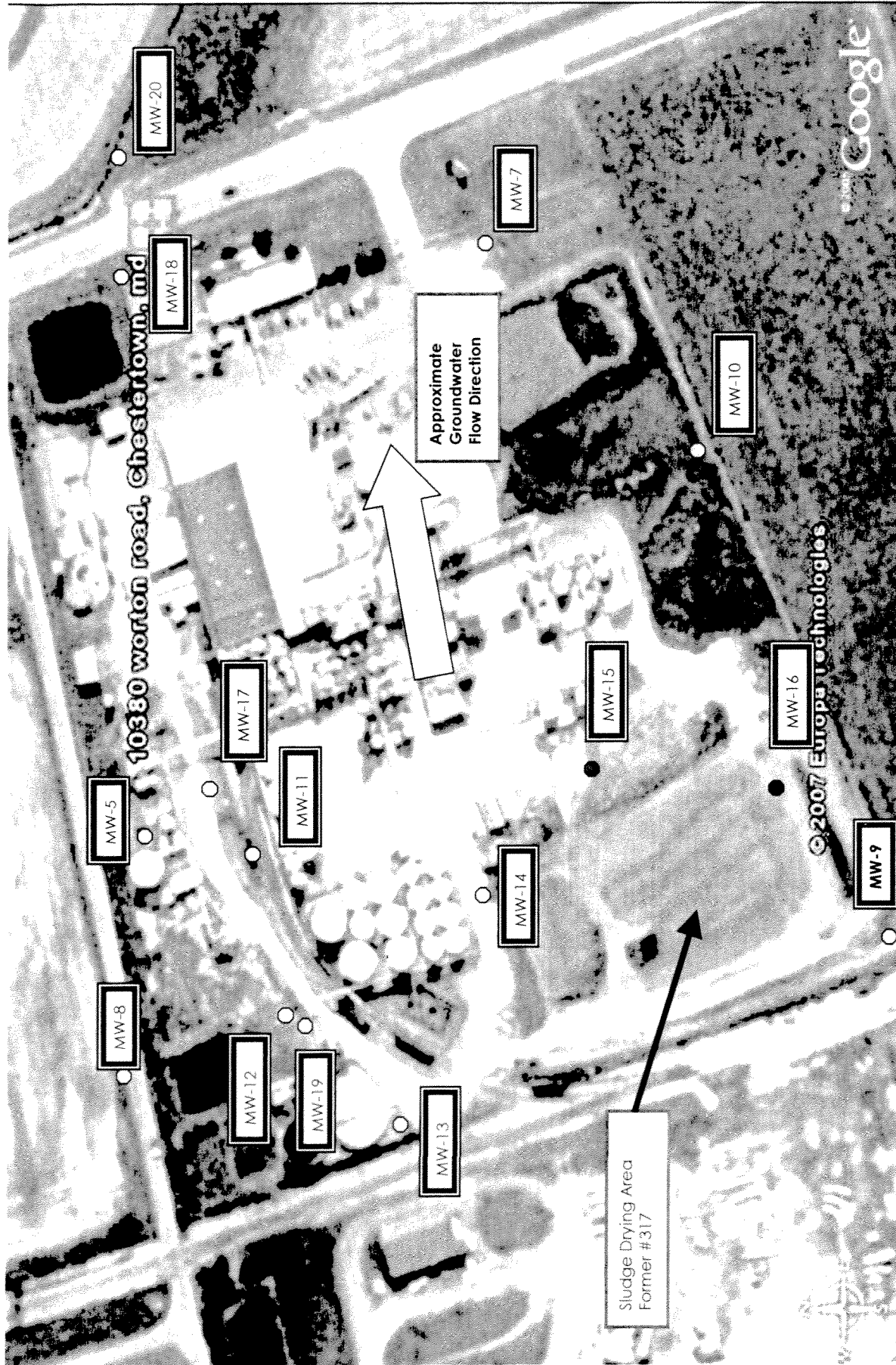


Legend: Not to Scale

- Existing Monitoring Well Locations (<25ppb)
- Monitoring Well Toluene concentration (Above MCL)
- Monitoring Well Toluene concentration (<5ppb)
- Groundwater Isoconcentration Toluene = 1000ppb

Figure 3 – Toluene Isoconcentration
Velsicol Chemical Corporation
10380 Worton Road, Chester town, Maryland

Data collected July/October 2007



Legend: Not to Scale

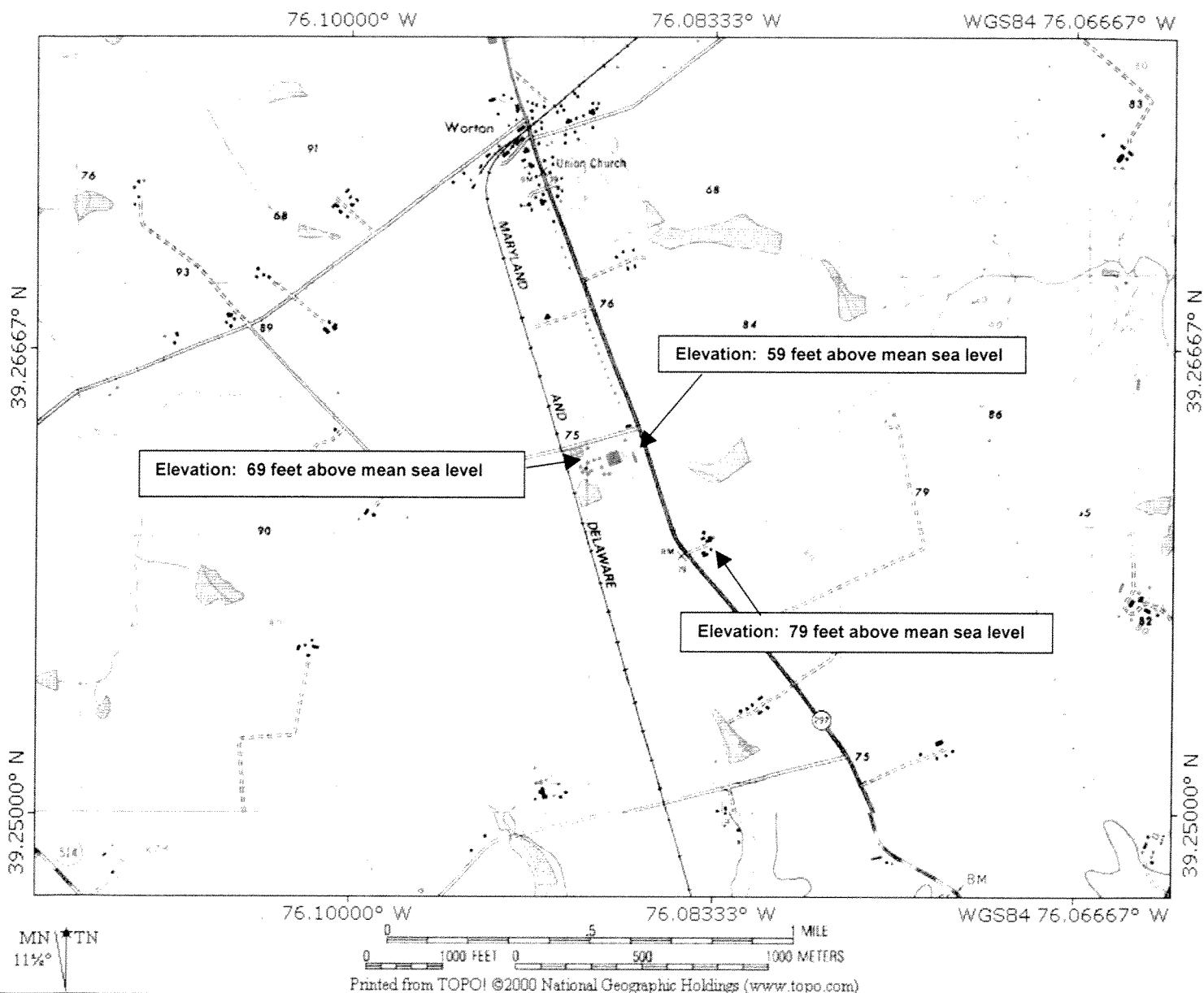
- Existing Monitoring Well Locations (<25ppb)
- Monitoring Well Benzene concentration (<50ppb)
- Monitoring Well Benzene concentration (<5ppb)
- Groundwater Isoconcentration Benzene = 5ppb

Figure 2 – Benzene Isoconcentration

Velsicol Chemical Corporation
10380 Worton Road, Chestertown, Maryland

Data collected July/October 2007

Topographic Map
 SITE NAME
 SITE ADDRESS
 CITY, STATE



MN 11° TN

Printed from TOPO! ©2000 National Geographic Holdings (www.topo.com)

15850 Crabbs Branch Way
 Suite 200
 Rockville, MD 20855
 Telephone: (301) 417-0200

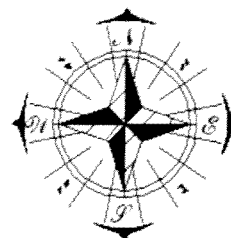


United States Department of the Interior
 Geological Survey
 7.5 Minute Series Topographic Map
 Contour Interval: 20 feet
 Scale: 1 inch = 2000 feet
 Betterton, MD
 Elevation Data: USGS 1 arc-second
 NED, 1 meter vertical precision

Project:

Client:

Date:



Meeting With

VELSICOL CHEMICAL COMPANY

November 30, 2007

<u>Name</u>	<u>Organization</u>	<u>Contact Info.</u>
Julie Lowe	MDE Compliance	(410) 537-3511
Carol Coates	MDE Compliance Program	410 537-3978
Dave Lyons	MDE-WMA-Compliance	410-537-3626
Granny Kearney	MDE WMA Dep Director	410 537 3512
JENNIFER WARZSKI	MDE - OAG	410 - 537-3058
ELIZABETH KARKULA	VELSICOL	847 635 3479
Mike Yost	Apex Companies	301 417-0200
CHUCK HANSON	VERISOL	901-320-9995-129
ROSS McMILLAN	VELSICOL	847-635-3490.
Marian. Huang	M. Le + Stockbridge	410-385-3604
Ed Stone	MDE	mshuang@m-lestockbridge.com. estone@mde.state.md.us

tasks required under this Consent Judgment and Decree. The quarterly reports shall be due to the Department on the dates provided in Paragraph (10).

(15) The monitoring and reporting obligations of Paragraphs (9) through (11) shall continue until the Department determines that requirements of this Consent Judgment and Decree have been satisfied.

(7) Immediately upon approval of thereof, implement the Remedial Action Plan in accordance with the approved schedule.

B. Wastewater Sludge

(8) Upon the date of entry of this Consent Judgment and Decree, the Defendant shall cease the land application of wastewater sludge to any portion of the Site.

(9) Within ten (10) days of the date of entry of this Consent Judgment and Decree, the Defendant shall submit to the Department for review and approval a Stormwater Pollution Prevention Plan (P2 Plan) for fugitive pollutant stormwater discharges pursuant to provisions established by the Permit.

C. Wastewater Treatment Plant Upgrades

(10) Immediately upon the date of entry of this Consent Judgment and Decree, the Defendant shall cease all discharges of partially treated process wastewater from the Facility's wastewater treatment plant to the unlined recycling ponds 313 and 315.

(11) Within thirty (30) days of the date of entry of this Consent Judgment and Decree, but not later than March 1, 2008, whichever date comes first, Defendants shall submit to the Department, for review and approval, a plan and schedule for the upgrade to the Facility's onsite wastewater treatment plant (WWTP Plan & Schedule). The WWTP Plan & Schedule shall include:

- (a) A description of all existing and new treatment processes that will be used to treat process wastewater from the operation of the Facility, including measures to ensure the protection of groundwater if recycling ponds 313 and 315 will be utilized such as removal of existing wastewater and sludge in the ponds and lining the ponds.
- (b) If recycling ponds 313 and 315 will not be utilized either in the interim to upgrading the wastewater treatment plant or upon upgrade of the wastewater treatment plant, then the Defendant shall include in the WWTP Plan and Schedule a plan for the remediation of recycling ponds 313 and 315.
- (c) A description of how the upgrades to the wastewater treatment plant will eliminate waste sludge and therefore the need to dispose of said waste sludge.

- (d) Include a proposed time schedule for all tasks, including design and construction of the upgrades to the wastewater treatment plant. The schedule shall specify that construction shall be completed and the wastewater treatment plant shall comply with Permit discharge limits within two years of the date that the Department signs this Consent Judgment and Decree.

Defendant shall begin implementation of the Department-approved WWTP Plan & Schedule according to the schedules contained therein, but not later than May 1, 2008, whichever comes first, and shall complete implementation according to the schedules contained therein, but not later than December 31, 2009.

D. Monitoring

(12) Beginning upon entry of this Consent Judgment and Decree and unless more stringent monitoring is required under other terms in this Consent Judgment and Decree, the Defendant shall continue to conduct groundwater monitoring and wastewater sampling at the Site pursuant to the terms and conditions set forth in the Discharge Permit. The monitoring and sampling obligations required by this Consent Decree shall continue until the Department determines that the requirements of this Consent Decree have been satisfied.

E. Reporting

(13) Beginning upon entry of this Consent Judgment and Decree, the Defendant shall submit to the Department on a quarterly basis the results of all groundwater monitoring required to be performed pursuant to paragraph 12 above and any other sampling results required pursuant to any other approved plan. In addition, the Defendant will notify the Department within five days of receiving any sample results above the MCLs for benzene, toluene or BEHP in the monitoring wells at the property line, MW-9, MW-10, MW-20, MW34, and MW-37. The sampling results obtained during each calendar quarter shall be submitted to the Department no later than January 31st, April 30th, July 31st, and October 31st of each calendar year, except for the first submittal shall be due on April 30th 2008. The July 31st quarterly report for each year shall include a long-term trend analysis, and a summary of the status and effectiveness of the remedial actions in meeting the remediation goals of this Consent Judgment and Decree.

(14) Beginning upon entry of this Consent Judgment and Decree, the Defendant shall submit to the Department on a quarterly basis a report on the progress of compliance with the

(3) Within sixty (60) days of the Department's approval of the Characterization Plan, Defendant shall submit to the Department, for review and approval, an Initial Characterization Report, explaining in detail the results of Defendant's initial characterization of the nature and extent of soil, groundwater and surface water contamination related to activities at the Site.

(4) Within thirty (30) days of the Department's approval of the Initial Characterization Report, Defendant shall submit to the Department, for review and approval, a plan and schedule for the evaluation of remedial options to address soil, surface water and groundwater contamination identified in the approved Initial Characterization Report ("Evaluation Plan"). The evaluation provided for under this Evaluation Plan shall consider the broadest appropriate range of remedial alternatives, including, but not limited to, source controls and plume controls. The Evaluation Plan shall include a proposed schedule for all tasks, culminating in the submission to the Department, for review and approval, of a plan proposing Defendant's preferred remedial alternative ("Remedial Action Plan"), which plan is more fully described in paragraph A(6), below.

(5) Immediately upon approval thereof, implement the Evaluation Plan in accordance with the approved schedule.

(6) Within sixty (60) days of approval of the Evaluation Plan, submit to the Department for review and approval, a Remedial Action Plan. The Remedial Action Plan shall provide for implementation of a remedial action alternative that is adequate and sufficient to eliminate soil, surface water (including stormwater) and groundwater contamination related to activities at the Site and to achieve and maintain all applicable groundwater, surface water, sediment, and soil quality standards. It shall include a schedule for detailed engineering, construction, start-up and performance monitoring of the selected remedy. This schedule shall provide for the commencement of the selected remedial action as soon as practicable, but in any case, within one (1) year of the entry of this Consent Judgment and Decree, shall provide for the completion of any construction phase of the remedial action within eighteen (18) months of entry of this Consent Judgment and Decree, and shall provide for operation of the remedy until such time that Defendant can demonstrate that all then-applicable groundwater, surface water, sediment, and soil quality standards have been achieved and can be maintained without further remedial action.

RESPONSE ACTIVITIES

A. Water and Soil Characterization and Remediation

(1) Within thirty (30) days of the date of entry of this Consent Judgment and Decree, Defendant shall submit to the Department, for review and approval, a plan and schedule for characterizing the nature and extent of soil, groundwater and surface water contamination related to activities at the Site ("Characterization Plan"). This Characterization Plan shall provide for initial and on-going monitoring of soil, groundwater, and surface water, and shall be sufficiently comprehensive and detailed to describe existing and potential sources of adverse environmental and/or public health impacts on and within one mile of the Site. The Characterization Plan, at a minimum, shall:

- a. identify appropriate locations for groundwater monitoring wells, including those to be designated up-gradient and down-gradient of potential sources of contamination;
- b. identify appropriate locations for monitoring of surface waters and associated soils in the receiving waters down-stream of discharges from Outfalls 001 and 002, including the Velsicol Pond and the intermittent stream down-stream thereof;
- c. provide for quarterly monitoring of constituents of concern, including but not limited to all Permit parameters, benzene, toluene, phosphorous, nitrogen and BEHP;
- d. include appropriate quality assessment and quality control for sampling and monitoring in accordance with 40 CFR Part 136;
- e. consider available data from drinking water and irrigation wells within a one-mile radius of the Site;
- f. provide for the preparation of an Initial Characterization Report, to be completed and submitted to the Department in accordance with paragraph A.(3), below.

(2) Immediately upon the Department's approval thereof, implement the Characterization Plan in accordance with the approved schedule.

STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
1800 Washington Blvd
Baltimore, Maryland 21230,

Plaintiff

v.

VELSICOL CHEMICAL CORPORATION
10380 Worton Road
Chestertown, Maryland 21620

SERVE ON:

The Corporation Trust Incorporated
300 E. Lombard St
Baltimore, MD 21202

Defendant

IN THE
CIRCUIT COURT
FOR
KENT COUNTY

CASE No. _____

COMPLAINT FOR INJUNCTIVE RELIEF AND CIVIL PENALTY

The State of Maryland, Department of the Environment ("Department" or "MDE"), by its attorneys, Douglas F. Gansler, Attorney General of Maryland, and Jennifer L. Wazenski and Colleen A. Lamont, Assistant Attorneys General, files this Complaint for Injunctive Relief and Civil Penalty against Defendant Velsicol Chemical Corporation ("Velsicol") for the following reasons:

PRELIMINARY STATEMENT

1. Velsicol manufactures plasticizers and synthetic lubricants at a facility located on Maryland Rt. 297, two miles north of the intersection of MD Routes 297 and 213 in Chestertown, Kent County, Maryland ("Facility"). For many years, chemical-laden process wastewater from the Facility was discharged to a series of unlined ponds or impoundments on the property that emptied to a tributary of Morgan Creek, which flows to the Chester River and, eventually, the Chesapeake Bay. These wastewater disposal practices contaminated soil and

groundwater beneath the Facility with phthalates and other organic chemicals, including benzene and toluene. Wastewater treatment processes at the Facility have since been modernized, but the soil and the groundwater beneath the Facility remain contaminated at levels greatly exceeding applicable water quality standards and expected background levels. Pursuant to an agreement with MDE dating back to the late 1980s, Velsicol and its predecessor in interest have monitored and, until mid-2003, remediated contaminated groundwater through pumping and treatment. Velsicol requested and was allowed by MDE to discontinue groundwater remediation temporarily to accommodate the removal of contaminated soil in the area of one former impoundment. In spite of persistent groundwater contamination, Velsicol has refused to resume adequate groundwater remediation. Further, MDE has reasonable grounds to believe, based on samples collected by the Chester River Association, that certain contaminants discharged in the Facility's wastewater effluent that may pose a threat to surface water have been found in pond sediments downstream of the site.

2. This action concerns Defendant's violation of the State's water pollution control and hazardous substance laws through the contamination of groundwater and failure to adequately remediate groundwater contaminated with phthalates and other organic chemicals, such as toluene and benzene, generated at the Facility. The Department seeks civil penalties and injunctive relief requiring Velsicol to remediate the contaminated groundwater to achieve and maintain applicable Maryland drinking water standards.

JURISDICTION AND VENUE

3. The State brings this action for injunctive relief and civil penalties pursuant to §§ 7-222, 7-266, 9-339, and 9-342(a) of the Environment Article, Annotated Code of Maryland.

4. This Court has jurisdiction over the subject matter of this action pursuant to §§ 6-102 and 6-103 of the Courts and Judicial Proceedings Article, Annotated Code of Maryland.

5. Venue is proper in this Court pursuant to § 6-201 of the Courts and Judicial Proceedings Article, Annotated Code of Maryland, because the defendant carries on a regular business in Kent County, Maryland and has engaged in activities relevant to this Complaint in Kent County, Maryland.

PARTIES

6. Plaintiff, MDE, is a State agency within the Executive Branch of the State of Maryland, as more fully described in Subtitle 2 of Title 8 of the State Government Article. MDE is charged with the responsibility and duty to enforce State laws and to adopt and enforce State regulations regarding the release of controlled hazardous substances ("CHS") pursuant to Title 7 of the Environment Article, Annotated Code of Maryland, and to license those engaged in the discharge of pollutants to waters of this State and to enforce State laws governing discharges of pollutants to waters of this State, pursuant to Title 9, Subtitle 3 of the Environment Article.

7. Defendant, Velsicol Chemical Corporation, is a Delaware corporation licensed to do business in the State of Maryland. Velsicol owns and operates the Facility.

REGULATORY SCHEME

Hazardous Substances Response

8. The State has a comprehensive regulatory scheme for the control, handling, and storage of hazardous substances under Title 7 of the Environment Article and Code of Maryland Regulations ("COMAR") 26.14.02.

9. The Department's authority to address the unauthorized release of hazardous substances derives from Md. Code Ann., Envir. Art. § 7-222, which, among other things,

authorizes the Secretary, upon determining that there may be an imminent and substantial endangerment to the public health or welfare or to the environment, to issue orders or seek injunctive relief against responsible parties as may be necessary to protect the public health and welfare or the environment.

10. Additionally, pursuant to COMAR 26.14.02.06C(1), the Department may require a responsible person to conduct and directly fund a site remediation pursuant to an Order issued by the Department. An Order requiring remedial response may set forth specific conditions for the performance of the remediation.

11. In addition to being subject to injunctive relief, § 7-266 of the Environment Article provides that a person who violates any provision of Title 7, Subtitle 2 of the Environment Article or any rule, regulation, order, hauler certificate, vehicle certificate, or facility permit adopted or issued under that subtitle is liable for a penalty not exceeding \$25,000, to be collected in a civil action. Each day a violation occurs is a separate violation.

12. "Hazardous substance" is defined under Maryland law to include any substance defined as a hazardous substance under § 101(14) of the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or identified as a controlled hazardous substance by the Department in the Code of Maryland Regulations. CERCLA defines "hazardous substance" to include hazardous wastes with characteristics identified under or listed pursuant to § 3001 of the federal Resource Conservation and Recovery Act (RCRA). Envir. Art. § 7-201(m).

13. "Release" is defined as "the addition, introduction, leaking, spilling, emitting, discharging, escaping, or leaching of any hazardous substance into the environment." Envir. Art. § 7-201(s).

14. "Responsible person" is defined to include, among others, "the owner or operator of a vehicle or site containing a hazardous substance." Envir. Art. § 7-201(u).

Water Pollution Control

15. Maryland law prohibits the unauthorized discharge of any pollutant into the waters of the State of Maryland. Md. Code Ann., Envir. § 9-322; § 26.08.03.01A(1)(a).

16. Authority over permitting and regulation of discharges to waters of this State is vested in the Department pursuant to §§ 1-404, 9-319, and 9-322 to 9-328 of the Environment Article.

17. It is the policy of this State "[t]o provide that no waste is discharged into any waters of this State without first receiving necessary treatment or other corrective action to protect the legitimate beneficial uses of the waters of this State." Md. Code Ann., Envir. § 9-302(b)(3).

18. Section 9-339 of the Environment Article authorizes the Department to bring an action for an injunction against any person who violates any provision of Title 9, Subtitle 3 or any rule, regulation, order, or permit adopted or issued by the Department under this subtitle. On showing that any person is violating or is about to violate this subtitle or any rule, regulation, order, or permit adopted or issued by the Department, the court shall grant an injunction without requiring a showing of an adequate remedy at law. § 9-339(c).

19. Section 9-342 of the Environment Article provides that a person who violates any provision of the subtitle, or any rule, regulation, order or permit adopted under the subtitle is liable for a civil penalty not to exceed \$10,000, to be collected in a civil action brought by the Department. Section 9-342 further provides that each day a violation occurs is a separate violation.

20. "Person" is defined to include an individual or a corporation. COMAR 26.08.01.01(62).

21. "Discharge" is defined as the addition, introduction, leaking, spilling, or emitting of any pollutant into the waters of the State or the placing of a pollutant in a location where it is likely to pollute. Md. Code Ann., Envir. § 9-101(b); COMAR 26.08.01.01B(20).

22. "Pollutant" is defined as any waste or wastewater that is discharged from any publicly owned treatment works, industrial source, or any other liquid, gaseous, solid, or other substances that will pollute the waters of the State. Md. Code Ann., Envir. § 9-101(g); COMAR 26.08.01.01(66).

23. "Waters of this State" are defined to include, *inter alia*, "Both surface and underground waters within the boundaries of this State subject to its jurisdiction, including that part the Atlantic Ocean within the boundaries of this State, the Chesapeake Bay and its tributaries, and all ponds, lakes, rivers, streams, tidal and nontidal wetlands, public ditches, tax ditches, and public drainage systems within this State, other than those designed and used to collect, convey or dispose of sanitary sewage." Md. Code Ann., Envir. § 9-101(l)(1); COMAR § 26.08.01.01(103)(a).

Regulation of Chemicals of Concern

24. Toluene is an organic chemical that has been found to act as a neurotoxin. In the short term it can cause minor nervous system disorders such as fatigue, nausea, weakness, and confusion. In the long term, at levels above the maximum contaminant level ("MCL") established by the federal Environmental Protection Agency ("EPA") under the Safe Drinking Water Act and also adopted by the Department, it has the potential to cause more pronounced nervous disorders such as spasms; tremors; impairment of speech, hearing, vision, memory, and

coordination; and liver and kidney damage. The MCL for toluene is 1 part per million ("ppm"). See COMAR 26.04.01.07D(16). Toluene is a pollutant within the meaning of State and federal water pollution control laws and a hazardous substance within the meaning of State and federal hazardous substance control laws.

25. Benzene is a highly flammable aromatic liquid. It is commonly used as a solvent and a building block for making plastics, rubber, resins, and synthetic fabrics. It is also commonly generated from the breakdown of more complex aromatic compounds. Exposure to benzene for relatively short periods of time can cause temporary nervous system disorders, immune system depression, and anemia. Long-term exposure can cause chromosomal aberrations and cancer. The MCL for benzene is 5 parts per billion ("ppb"). See COMAR 26.04.01.07D(2). Benzene is a pollutant within the meaning of State and federal water pollution control laws and a hazardous substance within the meaning of State and federal hazardous substance laws.

26. Bis(2-ethylhexyl) phthalate or BEHP (also called Di(2-ethylhexyl) phthalate or DEHP) is the most commonly used of a group of related chemicals called phthalates or phthalic acid esters. The most common use of BEHP is as a plasticizer for polyvinyl chloride ("PVC") and other polymers. Short-term exposure to BEHP can cause mild gastrointestinal disturbances, nausea, and vertigo, while longer term exposure can cause damage to liver and testes, reproductive effects, and cancer. The MCL for BEHP is 6 ppb. See COMAR 26.04.01.07E(19). BEHP is a pollutant within the meaning of State and federal water pollution control laws and a hazardous substance within the meaning of State and federal hazardous substance control laws.

FACTUAL ALLEGATIONS

The Facility

27. The primary manufacturing process at the Facility consists of reacting phthalic anhydride and alcohols in the presence of an acid catalyst to form phthalate esters. Wastewater is generated by washing and neutralization of the reactor contents. A diagram of the Facility is attached hereto and incorporated herein as Exhibit A.

28. The Facility is located in a relatively rural area, between Chestertown to the south and Worton to the north. Residential houses lie immediately to the north of the Facility along Maryland Rt. 297. Farmland lies immediately to the east, west, and south of the Facility.

29. Groundwater beneath the Facility consists of an unconfined, surficial aquifer and, below that, a deeper, confined aquifer known as the Monmoth Formation. Although most homes within a ½ mile radius of the Facility are on public water supplied by the Town of Worton, Velsicol has reported that a farm house approximately a quarter of a mile south of the Facility utilizes a shallow (approximately 30 ft. deep) potable water well that likely draws from the unconfined, surficial aquifer. In addition, several of the houses to the north on Rt. 297 have shallow drinking water wells that predate the availability of public water and which have never been abandoned.

30. The Velsicol Facility, which occupies approximately 24 acres, was developed for the production of synthetic lubricants by Lehigh Chemical during the 1950's. Tenneco Chemicals purchased the facility and expanded the operation prior to the sale of the business to Nuodex in 1982. Huls-America purchased the operation in 1985 and operated the Facility, later as Creanova Inc., through 1994, when the lubricants business assets were sold to Velsicol.

31. The former Creanova Inc. is now part of Degussa Corporation. When the Facility was sold to Velsicol in 1994, Degussa assumed, under the terms of their agreement, continuing responsibility for remediating certain identified contamination. As such, Degussa, acting through various environmental consultants, has conducted certain investigations and remedial actions, discussed in paragraphs, 35-43, below. The asset sale agreement between Degussa and Velsicol does not affect Velsicol's liability to the State under Titles 7 and 9 of the Environment Article.

32. Currently, process wastewater generated at the Facility is discharged to an on-site treatment system, which includes physical separation, equalization, and biological treatment prior to surface water discharge to an unnamed tributary of Morgan Creek.

33. Previously, wastewater treatment was conducted in a series of earthen impoundments, which were assigned identification numbers. Process wastewater was initially treated in an API (American Petroleum Institute) oil/water separator. The effluent from the oil/water separator discharged to Impoundment 314 and then to Impoundment 317. The function of these two unlined impoundments appears to have been primarily wastewater equalization. From these impoundments the wastewater was discharged to Impoundments 308, 309, and 310 (in series). Impoundments 308, 309, and 310, also unlined, were part of the aerated biological wastewater treatment system.

34. Impoundments 308, 309, 310, and 314 occupied approximately 3,000 to 5,000 square feet each, while Impoundment 317 occupied approximately 90,000 square feet. These impoundments were removed from service over time. Impoundment 314 was taken out of service in 1987 and Impoundments 308, 309 and 310 were removed from service in 1993. Accordingly to Velsicol personnel, wastewater was not sent to Impoundment 317 after 1997.

35. The Fire Pond is an unlined earthen impoundment at the Facility that was previously part of the Facility's wastewater treatment system. It was converted in 1968 for use as part of the Facility's fire protection system, and is periodically replenished with well water.

36. The anaerobic wastewater treatment system at the Facility produces waste solids that have historically been processed on four (4) sludge-drying fields totaling approximately 1.6 acres. Dry solids are then reportedly shipped off-site to an approved landfill. In 2003, Velsicol reported that it applied sludge to the fields at a rate of 1200 pounds per day. That year, due to significant rainfall, the company requested permission to expand the sludge drying area to include former Impoundment 317.

The Discharge Permit

37. Pursuant to Title 9, Subtitle 3, of the Environment Article and regulations promulgated thereunder, and the provisions of the Clean Water Act, 33 U.S.C. Section 1251 et seq., and implementing regulations at 40 CFR Parts 122, 123, 124, and 125, the Department issued State Discharge Permit 99-DP-0014, NPDES Permit MD0000345 ("Permit") to Velsicol, effective February 1, 2001, authorizing the discharge of certain pollutants from the Facility to an unnamed tributary of Morgan Creek, surface waters of the State, in accordance with certain enumerated general and special conditions. The Permit also establishes groundwater monitoring requirements. The Permit is attached hereto and incorporated herein as Exhibit B.

38. Special Condition L of the Permit requires Velsicol to maintain and operate groundwater monitoring wells throughout the Site. The monitoring wells (MW) are required to be sampled on a scheduled basis specific to each MW for total organic carbon; chemical oxygen demand; toxic organics, including volatile organic compounds; and pH.

39. Special Condition M of the Permit authorizes the land application of biological sludge on drying beds in the south west corner of the Site. The Condition also requires Velsicol to submit a chemical analysis of the sludge once a year that tests for total cadmium, total mercury, total nickel, total lead, total zinc, and total organics.

Soil and Groundwater Contamination

40. Facility operators have known that soil and groundwater at the Facility were contaminated since at least the 1980s, when a series of monitoring wells were first installed. An investigation conducted in 1987 and 1988 identified soil and groundwater impacts in the area of Impoundment 314. The primary constituents were phthalates (with BEHP being the highest detected phthalate) and volatile organic compounds or VOCs (primarily toluene).

41. In 1989, IT Corporation, acting on behalf of the Facility's owner, prepared a closure plan for Impoundment 314 that proposed excavation and off-site disposal of sediment from within the impoundment, in-situ bioremediation of the soil beneath the impoundment, and bioremediation of groundwater near the impoundment.

42. By letter dated May 2, 1989, MDE approved the closure plan for Impoundment 314, conditioned on an implementation schedule, quarterly and final reporting obligations, and achievement of a remediation goal. The remediation goal established in the approval was a phthalate concentration in the groundwater less than or equal to 770 ppb for two consecutive quarters in monitoring wells MW-5, MW-11, MW-12, MW-13, and MW-14. The approval was further conditioned on the owner's agreement to continue groundwater sampling and resume remediation if phthalate concentrations increase above the remediation goal.

43. In 1992, EPA promulgated regulations identifying BEHP as a B2 Carcinogen (probable human carcinogen) with a maximum contaminant level goal or MCLG of zero and an

MCL of 0.006 mg/L (57 FR 31776). This regulatory limit superseded MDE's previous remediation goal of 770 ppb.

44. Sediment from Impoundment 314, after being stabilized with cement kiln dust ("CKD") was excavated and disposed of off-site. The bioremediation system, with modifications, was installed and its operation initiated. The bioremediation consisted of four recovery wells and a sprinkler system to deliver nutrients to the impoundment area to enhance biodegradation.

45. After excavation, a two to four foot thick CKD-impacted layer of soil remained above the native soil in Impoundment 314. The low permeability CKD soil layer limited the use of the sprinkler and bioremediation system, resulting in groundwater recovery and treatment as the primary remediation activity.

46. A limited sampling program was conducted on Impoundments 308, 309, and 310 in October 1994. Based on the analytical results of that investigation, Bis(2-ethylhexyl) phthalate, or BEHP, was identified by the owner's consultant as a "compound of concern" in those areas.

47. During March 2000, an additional investigation was conducted to delineate and characterize the impacted sediment and soil in Impoundments 308, 309, 310, and 314. It was determined as a result of that investigation that there was BEHP-impacted material extending below the groundwater table in Impoundments 308, 309, and 314. Elevated levels of toluene were also detected in Impoundment 314 below the historical high level of the groundwater table. Based on the findings of its investigation, excavation and off-site disposal was undertaken to remediate impacted soil and sediment in Impoundments 308 and 314.

48. Groundwater recovery and treatment was performed from four recovery wells located in the wastewater impoundment area from 1992 through 2003. In July 2003, Degussa requested, and MDE authorized them, to stop pumping and treating groundwater temporarily while they were removing contaminated soil from the impoundment area. At that time, the groundwater recovery and treatment system was dismantled and removed to facilitate soil remediation of Impoundments 308 and 314.

49. Free product has been historically observed in 2 groundwater monitoring wells (MW 12 and MW 19) located adjacent to the Southern end of Impoundment 314. Degussa reports that, in February 2003, Velsicol initiated routine bailing of free product from those wells, apparently when monthly groundwater elevations are recorded.

50. Historical monitoring of a shallow monitoring well (MW 18) located in the general vicinity of the Fire Pond has revealed benzene, toluene, and BEHP as constituents of concern in this area.

51. Notwithstanding the fact that BEHP, toluene, and benzene are still present in the groundwater at the Facility at levels exceeding applicable MCLs, neither Velsicol nor its predecessor in interest have resumed pumping and treating groundwater since completing the aforementioned soil removal. A summary of groundwater sampling data from 2001 through April 2007 is attached hereto and incorporated herein as Exhibit C.

52. Velsicol continues to apply waste sludge that contains phthalates and other organic chemicals to sludge drying beds under the terms of the Permit. However, because the groundwater is contaminated with some of the same chemicals, it is unclear whether the land application of sludge is allowing additional chemicals to leach into the underlying soil and groundwater. Velsicol has represented that the phthalates in the sludge are largely bound up in

the sludge solids, but the company has yet to demonstrate that the sludge water contains BEHP in concentrations below the MCL. The leaching of chemicals from this sludge into the groundwater would constitute an unauthorized discharge of pollutants to waters of the State.

53. Upon information and belief, during the summer of 2007, members of the Chester River Association ("CRA") conducted sampling of soil below a weir downstream of the Velsicol Pond, in the unnamed tributary of Morgan Creek across Md. Rt. 297 from the Facility. In at least one sample, CRA measured levels of BEHP greatly exceeding the MCL. The sampling point is in the receiving water and downstream of Velsicol's current and historical wastewater discharge outfall and also down gradient of the groundwater that flows beneath the Facility. As there are no other significant sources of BEHP in the vicinity of the Velsicol Pond, the results of the CRA sampling indicate that pollutants from Velsicol's wastewater have migrated off-site. Further sampling would be necessary to determine the extent of that migration.

54. On September 25, 2007, while performing a routine inspection of the Facility, an MDE Compliance Specialist noted that the Facility reported an unusually low effluent flow on its August 2007 Discharge Monitoring Report. During the inspection, Velsicol's Plant Manager stated that the reason for the low flow reported in August was that they were diverting treated wastewater that exceeds "internal operational set points" for total suspended solids to two of the old unlined impoundments (#313 and 315) for an undisclosed period of time before recirculating it through the clarifiers prior to discharge to outfall 001. Because the ponds provide no barrier preventing the wastewater from entering groundwater, this practice places pollutants in a position likely to pollute waters of the State. Discharges to groundwater are not authorized under the Permit.

COUNT ONE

(Unauthorized Discharge of Pollutants)

55. Paragraphs 1 through 54 are incorporated by reference as though fully set forth herein.

56. Velsicol's discharge of BEHP, toluene, and benzene to groundwater, though the continued leaching of those chemicals from various impoundments at the Facility, and the company's failure to adequately remediate soils and contaminated groundwater such that pollutants remained in a position likely to pollute and further migrate into groundwater at and beyond the boundaries of the Facility violated and continues to violate Section 9-322 and 9-323 of the Environment Article.

57. In light of the presence of drinking water wells in the vicinity of the Facility, termination of any further unlawful discharge and remediation of groundwater to restore natural conditions and achieve and maintain MCLs for hazardous substances identified is necessary to protect the public health and welfare and the environment.

58. Further, given the presence of one or more pollutants of concern in the waste solids generated by the anaerobic wastewater treatment system, discontinuation of the practice of applying sludge to various drying beds at the Facility is necessary pending completion of the groundwater remediation and verification that sludge drying practices do not contribute these pollutants to the soil or groundwater at levels that would contribute to an exceedance of applicable MCLs.

59. The presence of BEHP in one or more soil samples collected downstream of the Velsicol Pond in the unnamed tributary of Morgan Creek indicates that pollutants have migrated

off-site and may require soil and/or sediment remediation to prevent their continued migration through, and pollution of, waters of the State.

60. Velsicol's practice of diverting treated wastewater that exceeds "internal operational set points" for total suspended solids to two of the old unlined impoundments constitutes an unauthorized discharge to groundwater.

61. Section 9-339 of the Environment Article authorizes the court to enjoin any person who violates any provision of Title 9, Subtitle 3 or any rule, regulation, order, or permit adopted or issued by the Department under this subtitle. On showing that any person is violating or is about to violate this subtitle or any rule, regulation, order, or permit adopted or issued by the Department, the court shall grant an injunction without requiring a showing of an adequate remedy at law. § 9-339(c).

62. Section 9-342 of the Environment Article authorizes the court, upon request by the Department, to assess civil penalties of up to \$10,000 per day per violation of these provisions, with each day of continuing day of violation constituting a new violation.

63. For purposes of determining an appropriate penalty in this case, Vesicol's refusal to remediate contamination or to cease continued discharges of hazardous organic chemicals to groundwater, with knowledge of historical wastewater disposal practices and current groundwater monitoring results, should be considered willful. Further, the violations have caused and present a continued threat of harm to the public health, welfare, and the environment.

COUNT TWO

(Release of Hazardous Substance)

64. Paragraphs 1 through 63 are incorporated by reference as though fully set forth herein.

65. Velsicol, as owner and operator of the Facility, is a responsible person within the meaning of Title 7, subtitle 2 of the Environment Article.

66. Velsicol's release of BEHP, toluene, and benzene to groundwater, through the continued leaching of those chemicals from various impoundments at the Facility, and the company's failure to adequately remediate soils and contaminated groundwater such that hazardous substances remained in a position likely to further migrate into groundwater at and beyond the boundaries of the Facility violated and continues to violate Title 7, Subtitle 2 of the Environment Article.

67. In light of the presence of drinking water wells in the vicinity of the Facility, remediation of groundwater to restore natural conditions and achieve and maintain MCLs for hazardous substances identified is necessary to abate imminent and substantial endangerment to the public health or welfare and to the environment.

68. Further, given the presence of one or more hazardous substances in the waste solids generated by the anaerobic wastewater treatment system, discontinuation of the practice of applying sludge to various drying beds at the Facility is necessary pending completion of the groundwater remediation and verification that sludge drying practices do not contribute these hazardous substances to the soil or groundwater at levels that would contribute to an exceedance of applicable MCLs.

69. The presence of BEHP in soil and/or sediment samples collected downstream of the Velsicol Pond in the unnamed tributary of Morgan Creek indicates that hazardous substances have migrated off-site and may require soil and/or sediment remediation to prevent their continued release.

70. Pursuant to §§ 7-222 and 7-263 of the Environment Article, the Department is authorized to seek, and this court to grant, an injunction against responsible persons, like Velsicol, as may be necessary to protect the public health or welfare or the environment.

PRAYER FOR RELIEF


WHEREFORE, the State of Maryland, Department of the Environment, requests that this Court grant the following relief against Defendant Velsicol Chemical Company:

1. An injunction directing Velsicol to:
 - a. Remediate State groundwater to restore the aquifer to its natural condition and achieve Maryland drinking water quality criteria;
 - b. Cease the land application of waste sludge at the Site, and handle waste sludge from the wastewater treatment plant as a "removed substance" to be handled as prescribed in Special Condition D of the Permit; and
 - c. Establish the full extent of contamination in the unnamed tributary of Morgan Creek resulting from historical discharges of wastewater from the Facility and remediate any contamination identified to restore natural conditions and achieve Maryland drinking water standards and any other applicable surface water standards and clean-up standards applicable to soils and sediment;
 - d. Cease the unauthorized placement of wastewater into unlined impoundments at the Facility; investigate and correct any and all problems with the treatment process that are preventing treated wastewater from meeting internal operational set points and/or effluent limits; and report to MDE on why, how, how much and for how long wastewater was diverted to the impoundments.

2. A civil penalty of up to \$10,000 per day for each violation of Title 9, Subtitle 3 of the Environment Article, and of up to \$25,000 per day for each violation of Title 7, Subtitle 2 of the Environment Article; and
3. Such other relief as the Court deems just and proper.

Respectfully submitted,

DOUGLAS F. GANSLER
Attorney General of Maryland



JENNIFER L. WAZENSKI
COLLEEN A. LAMONT
Assistant Attorneys General
Maryland Department of the Environment
1800 Washington Boulevard, Ste. 6048
Baltimore, Maryland 21230

Attorneys for the Plaintiff
Maryland Department of the Environment

McGillen

From: John McGillen
To: Michael Richardson
Date: 10/23/2007 10:25:59 AM
Subject: Chester River Association - status of meeting w/Velsicol, request for application
Chestertown foods

Michael,

I received another call from Brent Walls of the Chester River Association. We had agreed to a meeting with their group and Velsicol but had told Velsicol we would give them some feedback on the sludge drying bed issue prior to scheduling it. Has any decision been made with regard to that issue?

Also, on 10/2 I passed on the following request:

"Also, he requested a copy of the permit application for Chestertown Foods. He asked if the application could be faxed to him at 410-810-7555. Could you pass this request on to the appropriate permit writer?"

He told me today he never received this and is asking if it can still be sent.

John

August 5, 2008

Correspondence Regarding Cadmium Monitoring

Waterworks
Staff Remark SK

CHE

From: "Szymanski, Joanne" <jszymanski@velsicol.com>
To: "Sean Kenny" <SKenny@mde.state.md.us>
Date: 8/5/2008 8:52 AM
Subject: RE: Velsicol Chemical Corporation 114-0009

Good Morning Sean,

Thank you for the good news!

Have a terrific day!

Joanne

Joanne K. Szymanski
Environmental Health and Safety Manager
Velsicol Chemical Corporation
10380 Worton Rd.
Chestertown, MD 21620
410-778-1991, x252
410-778-5538, fax
e-mail: jszymanski@velsicol.com

-----Original Message-----

From: Sean Kenny [mailto:SKenny@mde.state.md.us]
Sent: Tuesday, August 05, 2008 8:29 AM
To: Szymanski, Joanne
Subject: RE: Velsicol Chemical Corporation 114-0009

Hi Joanna,

Good news - I discussed your most recent Cadmium results with Nancy Reilman and she said that **the June and July results will suffice and** quarterly Cadmium monitoring can be discontinued.

Please find attached Velsicol's updated monitoring schedule reflecting this change.

Regards,

Sean

Sean W. Kenny
Public Health Engineer
Maryland Department of the Environment
1800 Washington Blvd, Ste. 450
Baltimore, MD 21230-1708
(410) 537-3793 (Office)
(410) 537-3157 (Fax)

>>> "Szymanski, Joanne" <jszymanski@velsicol.com> 8/4/2008 4:45 PM >>>
Hello Sean,

Attached are 3rd quarter results for cadmium (below detection level).

Please let me know if you have any questions.

Thank you,

Joanne

Joanne K. Szymanski
Environmental Health and Safety Manager
Velsicol Chemical Corporation
10380 Worton Rd.
Chestertown, MD 21620
410-778-1991, x252
410-778-5538, fax
e-mail: jszymanski@velsicol.com

-----Original Message-----

From: Sean Kenny [mailto:SKenny@mde.state.md.us]
Sent: Wednesday, June 18, 2008 12:46 PM
To: Szymanski, Joanne
Subject: RE: Velsicol Chemical Corporation 114-0009

Hi Joanne,

It won't count as the 3rd quarter per se (as we're still in June), but it will count as one of the results we will be looking at to decide whether quarterly monitoring can be discontinued. As we discussed on the phone, if a system gets significantly low results (such as this ND result) for 2 or 3 quarters then there is reason to discontinue monitoring and not require a system to do all 4 quarters. The decision will be made from there.

Regards,

Sean

Sean W. Kenny
Public Health Engineer
Maryland Department of the Environment
1800 Washington Blvd, Ste. 450
Baltimore, MD 21230-1708
(410) 537-3793 (Office)
(410) 537-3157 (Fax)

>>> "Szymanski, Joanne" <jszymanski@velsicol.com> 6/18/2008 12:31 PM >>>
Sean,

Resample (collected 6/5/08) result for Cadmium was <0.005 mg/L (see attached). Does this result count towards the next quarter (July) requirement?

Thanks,

Joanne

Joanne K. Szymanski
Environmental Health and Safety Manager
Velsicol Chemical Corporation
10380 Worton Rd.
Chestertown, MD 21620
410-778-1991, x252
410-778-5538, fax
e-mail: jszymanski@velsicol.com

-----Original Message-----

From: Sean Kenny [mailto:SKenny@mde.state.md.us]
Sent: Monday, June 02, 2008 8:47 AM
To: Szymanski, Joanne
Subject: Velsicol Chemical Corporation 114-0009

To: Ms. Joanne Szymanski

Ms. Szymanski,

IOC (Inorganic Chemicals) samples were collected from plant 01 of Velsicol Chemical Corporation on April 15, 2008. One of the specific contaminants, Cadmium, came up with a high result, 0.0051 mg/L, which is in exceedance of its MCL (Maximum Contaminant Level), 0.005 mg/L. All of the other IOCs were either non-detectable or below half of their MCLs. This high Cadmium result was confirmed with your lab, Chesapeake Environmental Lab, this morning. Due to this high result for Cadmium, MDE is placing Velsicol Chemical Corporation on quarterly monitoring for Cadmium, starting with the next quarter (July 1 - September 30, 2008). Once Velsicol Chemical Corporation obtains 4 consecutive quarters of Cadmium monitoring at levels below half the MCL, quarterly monitoring of Cadmium will be discontinued. Please arrange with your lab to have this monitoring completed and also find attached Velsicol's updated monitoring schedule reflecting this change.

Please confirm receipt of this email and let me know if you have any questions, either by email or at the number below.

Regards,

Sean Kenny

Sean W. Kenny
Public Health Engineer
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230
Water Supply Program
(410) 537-3793 (Office)
(410) 537-3157 (Fax)

The information contained in this communication may be confidential, is

intended only for the use of the recipient named above, and may be legally privileged.

If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication, or any of its contents, is strictly prohibited.

If you have received this communication in error, please re-send this communication to the sender and delete the original message and any copy of it from your computer system. Thank you.

<<<<GWIASIG 0.07>>>>

December 2, 2008

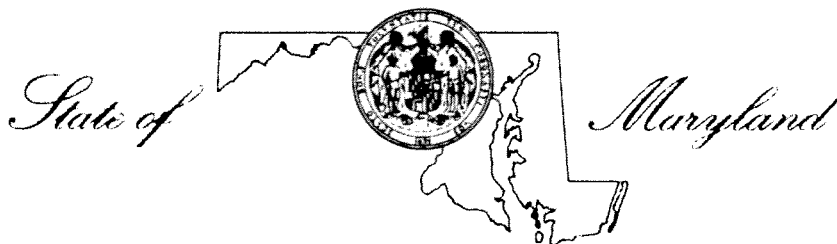
Construction Permit

KEEP PERMIT AT SITE

S/M
TR 12566

CONTROL NO. B-

02016



Martin O' Malley
Governor

Shari T. Wilson
Secretary

DEPARTMENT OF THE ENVIRONMENT

Air and Radiation Management Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

☒ Construction Permit

☐ Operating Permit

PERMIT NO. See Page 2 for List of
Permit Numbers

DATE ISSUED December 2, 2008

PERMIT FEE N/A

EXPIRATION DATE In accordance with
COMAR 26.11.02.04B

LEGAL OWNER & ADDRESS

Genovique Specialties Corporation
10380 Worton Road
Chestertown MD 21620
Attn: Ms. Joanne K. Szymanski

SITE

Genovique Specialties Corporation
10380 Worton Road
Chestertown MD 21620
KENT County
AI# - 2107

SOURCE DESCRIPTION


One (1) ester (plasticizer) manufacturing plant.

This permit includes limitations on premises-wide emissions so as to establish the Genovique Specialists Corporation, Kent County facility as a synthetic minor source with respect to Title V of the Federal Clean Act and with respect to potentially applicable standards promulgated under 40 CFR 63.

This permit supersedes all previous permits-to-construct issued to premises number 029-0001.

This source is subject to the conditions described on the attached pages.

Page 1 of 21


Program Manager


Director, Air and Radiation Management Administration

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

INDEX

- Part A – General Provisions
- Part B – Applicable Regulations
- Part C – Construction, Operation and Testing Requirements
- Part D – Monitoring, Record Keeping and Reporting
- Part E – Listing of Tanks, Surface Impoundments (Ponds) and Equipment Associated with Bulk Storage, Wastewater Treatment and Fire Protection

This permit-to-construct incorporates requirements for the following registered installations:

ARMA Permit Number	Description	Date of Installation
029-0001-4-0074	One (1) Boiler (Permittee designation 250 C.B. boiler), rated at 10.5 MMBtu/hr heat input, fired with residual and distillate fuel oils, waste combustible fluids (WCF) and used oils.	01/1960
029-0001-4-0075	One (1) Boiler (Permittee designation 700 C.B. boiler), rated at 29.3 MMBtu/hr heat input, fired with residual and distillate fuel oils and used oils.	01/1968
029-0001-6-0010	One (1) Hot Oil Heater (Permittee no. 2), rated at 15 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF and used oils.	01/1974
029-0001-6-0011	One (1) Hot Oil Heater (Permittee no. 3), rated at 14 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF and used oils.	01/1968
029-0001-6-0012	One (1) Hot Oil Heater (Permittee no. 1), rated at 10 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF and used oils.	01/1967
029-0001-7-0018	Equipment associated with one (1) esterification process as registered with the Department, including three (3) process reactors (Permittee designations K-121, K-127, and K-132) controlled by a regenerative thermal oxidizer (RTO) with a water scrubber for back-up control when the RTO cannot be operated.	01/1960
029-0001-9-0010	One (1) wastewater treatment plant that includes an oil/water separator, clarifiers, an equalization tank, a bioreactor, a sludge de-watering unit, and other equipment as listed in Table E-2 under Part E of this permit.	01/1960
029-0001-9-0013	One (1) tank farm comprising bulk storage tanks as listed in Table E-1 under Part E of this permit.	01/1960

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

Part A – General Provisions

- (1) The following Air and Radiation Management Administration (ARMA) permit-to-construct applications are incorporated into this permit by reference:
- (a) All valid applications for Processing or Manufacturing Equipment (Forms 5 and AMA-5) received at the Department prior to issuance of these permits, and pertaining to the Permittee's ester (plasticizer) manufacturing operations, tank farm and wastewater treatment plant.
 - (b) All valid applications for Fuel Burning Equipment (Forms 11 and AMA-11) received at the Department prior to issuance of this permit, and pertaining to the Permittee's boilers and hot oil heaters.
 - (c) All valid applications for Gas Cleaning or Emission Control Equipment (Forms 6 and AMA-6) received at the Department prior to issuance of this permit, and pertaining to the Permittee's air pollution control devices.
 - (d) All valid Summaries of Demonstrations for Meeting the Ambient Impact Requirement and T-BACT Requirements (Forms 5A) received at the Department from the Permittee prior to issuance of this permit.
 - (e) All valid Emissions Data (Forms 5B) received at the Department from the Permittee prior to issuance of this permit.

If there are any conflicts between representations in this permit and representations in the applications, the representations in the permit shall govern. Estimates of dimensions, volumes, emissions rates, operating rates, feed rates and hours of operation included in the applications do not constitute enforceable numeric limits beyond the extent necessary for compliance with applicable requirements.

- (2) Upon presentation of credentials, representatives of the Maryland Department of the Environment ("MDE" or the "Department") and the Kent County Health Department shall at any reasonable time be granted, without delay and without prior notification, access to the Permittee's property and permitted to:
- (a) inspect any construction authorized by this permit;
 - (b) sample, as necessary to determine compliance with requirements of this permit, any materials stored or processed on-site, any waste materials, and any discharge into the environment;

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

- (c) inspect any monitoring equipment required by this permit;
 - (d) review and copy any records, including all documents required to be maintained by this permit, relevant to a determination of compliance with requirements of this permit; and
 - (e) obtain any photographic documentation or evidence necessary to determine compliance with the requirements of this permit.
- (3) The Permittee shall notify the Department prior to increasing quantities and/or changing the types of any materials referenced in the application or limited by this permit. If the Department determines that such increases or changes constitute a modification, the Permittee shall obtain a permit-to-construct prior to implementing the modification.
- (4) Nothing in this permit authorizes the violation of any rule or regulation or the creation of a nuisance or air pollution.
- (5) If any provision of this permit is declared by proper authority to be invalid, the remaining provisions of the permit shall remain in effect.
- (6) This permit supersedes all previous permits-to-construct issued to premises number 029 – 0001.
- (7) Subsequent to issuance of this permit, the Department may impose additional and modified requirements that are incorporated into a State permit-to-operate issued pursuant to COMAR 26.11.02.13.

Part B – Applicable Regulations

- (1) This source is subject to all applicable federal air pollution control requirements including, but not limited to, all applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source Performance Standards (NSPS) promulgated under 40 CFR 60, Subparts A and Kb for volatile organic liquid storage vessels.

All reports and notifications required under 40 CFR 60, Subpart(s) A and Kb shall be submitted to the Compliance Program of the Department's Air and Radiation Management Administration.

- (2) This source is subject to all applicable federally enforceable State air pollution control requirements including, but not limited to, the following regulations:

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

- (a) COMAR 26.11.01.07C, which requires that the Permittee report to the Department occurrences of excess emissions.
- (b) COMAR 26.11.02.09A, which requires that the Permittee obtain a permit-to-construct if an installation is to be modified in a manner that would cause changes in the quantity, nature, or characteristics of emissions from the installation as referenced in this permit.
- (c) COMAR 26.11.06.02C(1), which limits visible emissions other than uncombined water to not more than 20 percent opacity.
- (d) COMAR 26.11.06.03B(1), which limits the concentration of particulate matter in any exhaust gases to not more than 0.05 grains per standard cubic foot of dry exhaust gas.
- (e) COMAR 26.11.09.05A(1), which limits visible emissions, other than uncombined water, from fuel burning equipment to not more than 20% opacity.
- (f) COMAR 26.11.09.06A(1), which prohibits the discharge to atmosphere of particulate matter from fuel burning equipment constructed before January 17, 1972 in excess of the amounts shown in Figure 1 under COMAR 26.11.09.09.
- (g) COMAR 26.11.09.06A(2), which prohibits the discharge to atmosphere of particulate matter from fuel burning equipment constructed on or after January 17, 1972 in excess of the amounts shown in Figure 2 under COMAR 26.11.09.09.
- (h) COMAR 26.11.09.07A(1)(b), which limits the sulfur content of residual fuel oil to not more than 2 percent by weight.
- (i) COMAR 26.11.09.07A(1)(c), which limits the sulfur content of distillate fuel oil to not more than 0.3 percent by weight.
- (j) COMAR 26.11.19.02I, which requires that the Permittee establish in writing and implement facility-wide "good operating practices" designed to minimize emissions of VOC.

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

- (k) COMAR 26.11.19.16, which requires that the Permittee implement a VOC leak detection and repair program designed to minimize unintended emissions of VOC from process equipment and components, e.g., in-process vessels, storage tanks, pumps, compressors, valves, flanges and other pipeline fittings, pressure relief valves, process drains, and open-ended pipes.
- (l) COMAR 26.11.19.30, which requires that the Permittee control emissions of volatile organic compounds (VOC) from organic and inorganic chemical production operations, and includes the following requirements for facilities that discharge total uncontrolled VOC emissions of 100 or more pounds per day:
 - (i) The Permittee shall duct each process vent and exhaust line from any installation with actual emissions of 20 pounds or more per day into a control device that has an overall VOC destruction or removal efficiency of at least 90 percent.
 - (ii) If the Permittee cannot achieve compliance because of an unavoidable outage or malfunction of the primary control device, the Permittee shall either:
 - a. discontinue operation until the primary control device is returned to proper service; or
 - b. use a back-up control device that is approved by the Department.
 - (iii) The back-up control device may not be used more than 10 percent of the annual operating time of the affected installation during any calendar year unless a longer period is approved by the Department.
- (3) This source is subject to all applicable State-only enforceable air pollution control requirements including, but not limited to, the following regulations:
 - (a) COMAR 26.11.02.13A(16), which requires that the Permittee obtain from the Department, and maintain and renew as required, a valid State permit-to-operate.
 - (b) COMAR 26.11.02.19C & D, which require that the Permittee submit to the Department annual certifications of emissions, and that the Permittee maintain sufficient records to support the emissions information presented in such submittals.

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

- (c) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
- (d) COMAR 26.11.09.10, which establishes requirements concerning use of used oils and waste combustible fluids as fuel.
- (e) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.
- (f) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions would unreasonably endanger human health.

Part C – Construction, Operation and Testing Requirements

- (1) Unless the Permittee obtains from the Department written authorization otherwise, all installations at the facility that were constructed, installed or modified prior to issuance of this permit shall conform to specifications included in the incorporated applications.
- (2) Except as otherwise provided in this part, all permitted installations at the facility shall be operated in accordance with specifications included in the incorporated applications and any operating procedures recommended by equipment vendors unless the Permittee obtains from the Department written authorization to use alternative operating procedures.
- (3) Unless the Permittee obtains from the Department written authorization otherwise, the Permittee shall limit air emissions in accordance with the following:
 - (a) Facility-wide emissions of nitrogen oxides (NO_x) shall be less than 100 tons in all periods of 12 consecutive months;
 - (b) Facility-wide emissions of sulfur oxides (SO_x) shall be less than 100 tons in all periods of 12 consecutive months; and
 - (c) Facility-wide emissions of hazardous air pollutants (HAP) shall be less than 10 tons for each individual HAP, and shall be less than 25 tons for the combined total of all HAPs, in all periods of 12 consecutive months.

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

- (4) In accordance with COMAR 26.11.19.02I, the Permittee shall implement "good operating practices" designed to minimize emissions of VOC to the atmosphere.
- (a) Where applicable, "good operating practices" shall include, at a minimum:
- (i) Provisions for training operators with regard to practices, procedures, and maintenance requirements that are consistent with equipment manufacturers' recommendations, and with requirements dictated by the Permittee's experiences with operation of equipment. The training shall include material concerning proper maintenance procedures for air pollution control equipment;
 - (ii) Maintenance of covers on containers and other vessels that are not in use and that contain VOC or VOC-bearing materials;
 - (iii) Scheduling operations as much as practical to minimize color changes and other material changes when applying VOC-bearing materials by spray application;
 - (iv) Where practical, using high-volume-low-pressure (HVLP) spray applicators or other high efficiency application methods for spray application of VOC-bearing materials; and
 - (v) Mixing and blending VOC-bearing materials, as much as practical, in closed containers, and implementing preventive measures designed to minimize emissions from products that contain VOC.
- (b) "Good operating practices" shall be established in writing, shall be made available to the Department upon request, and shall be either included as part of an operator training program or posted where clearly visible to operators.
- (c) The Permittee shall take all reasonable precautions to prevent or minimize the discharge of VOC into the atmosphere when cleaning process equipment and coating application equipment, including containers, vessels, tanks, lines, spray application devices, and pumps. Reasonable precautions for equipment cleanup shall include, at a minimum:

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

- (i) Storing all waste materials, including VOC-contaminated cloth and paper, in closed containers;
 - (ii) For frequently cleaned equipment, preparing written standard operating procedures that include, where practical, provisions for using non-VOC or low-VOC cleaning agents, and procedures designed to minimize the quantities of VOC-bearing cleaning materials used;
 - (iii) Where practical, using enclosed spray-applicator cleaning methods, VOC-recycling systems and other spray-applicator cleaning methods designed to reduce or eliminate VOC emissions; and
 - (iv) Where practical, using detergents, high-pressure water, or other non-VOC cleaning options to clean coating lines, containers, and process equipment.
- (d) With regard to storage and transfer of VOC, the Permittee shall, at a minimum:
 - (i) Install conservation vents, or other vapor control measures designed to minimize standing losses, on all storage tanks with a capacity of 2000 gallons or more in VOC service; and
 - (ii) For stationary storage tanks with capacities greater than 10,000 gallons and less than 40,000 gallons that store VOC or VOC-bearing materials, excluding gasoline, with vapor pressures greater than 1.5 psia, use vapor balance, vapor control lines, or other vapor control measures, whenever VOC are transferred from tank trucks into such tanks.
- (5) In accordance with COMAR 26.11.19.16, the Permittee shall visually inspect all equipment and components in VOC service for leaks at least once per calendar month. If leaks are detected, the Permittee shall:
 - (a) Tag any leak immediately so that the tag is clearly visible. The tag shall be made of a material that will withstand any weather or corrosive conditions to which it may be normally exposed. The tag shall bear an identification number, the date that the leak was discovered, and the identity of the person who discovered the leak. The tag shall remain in place until the leak has been repaired.

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

- (b) Initiate immediate action to repair all observed VOC leaks that can be repaired within 48 hours.
 - (c) Repair all other leaking components within fifteen (15) days of discovery. If a replacement part is needed, the part shall be ordered within three (3) days of discovery of the leak, and the leak shall be repaired within 48 hours of receipt of the part.
 - (d) Maintain a supply of components and component parts, such as seals, gaskets, packing and pipe fittings, that are known to wear or corrode, or that otherwise need to be routinely replaced.
- (6) In accordance with COMAR 26.11.19.16D, leaking components that cannot be repaired as required because they are inaccessible, or that cannot be repaired during operation of an installation, shall be identified in a log and included in the facility's maintenance schedule for repair during the next outage of the installation.
- (7) For the Permittee's Fuel Burning Equipment (2 Boilers and 3 Hot Oil Heaters as registered under ARMA registration numbers 4-0074, 4-0075, 6-0010, 6-0011, and 6-0012), the following shall apply:
- (a) For each fuel burning unit the Permittee is authorized to burn any of the following fuels provided that the fuel burning unit is equipped with a burner suitable for the selected fuel:
 - (i) Residual fuel oil with a sulfur content that does not exceed 2 percent by weight;
 - (ii) Distillate fuel oil with a sulfur content that does not exceed 0.3 percent by weight;
 - (iii) Waste combustible fluids as defined at COMAR 26.11.09.01.B(10); and
 - (iv) On-specification used oil as defined at COMAR 26.11.09.01.B(4-2).
 - (b) In accordance with COMAR 26.11.09.10B(1), used oil shall be considered on-specification if the used oil has a minimum flash point of 100°F and does not contain materials that exceed any of the following allowable levels:

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

Material	Allowable Level (ppm by weight)
Lead	100
Total Halogens	4,000 *
Arsenic	5
Cadmium	2
Chromium	10

* In accordance with COMAR 26.11.09.10B(2), for used oil that does not satisfy the rebuttable presumption for halogens at 40 CFR 279.10(b)(1)(ii) and 279.63, the maximum allowable level for halogens is 1000 ppm.

- (c) In accordance with COMAR 26.11.09.10C the Permittee shall not burn used oil that contains 50 or more ppm by weight polychlorinated biphenyls (PCBs).
- (8) For the Permittee's Ester (Plasticizer) Manufacturing Plant (ARMA registration no. 7-0018) the following shall apply:
 - (a) The Permittee shall vent all process exhaust gases from reactors K-121, K-127, and K-132 through a regenerative thermal oxidizer (RTO) or a water scrubber prior to discharge to atmosphere. The water scrubber shall be used only when the RTO is inoperable or out of service for maintenance, and shall be used not more than 10 percent of the annual operating time of the ester (plasticizer) manufacturing plant; and
 - (b) Unless the Permittee obtains from the Department written authorization otherwise, whenever process exhaust gases from the ester (plasticizer) manufacturing plant are vented to the RTO, the Permittee shall maintain the temperature of the combustion zone of the RTO at a minimum of 1400 °F.
- (9) For the Permittee's tank farm (ARMA registration no. 9-0013) and wastewater treatment plant (ARMA registration no. 9-0010): Before discharge to atmosphere VOC emissions from each of the storage tanks and wastewater treatment units listed in the following table shall be exhausted through a carbon adsorption system that includes at least two (2) carbon canisters arranged in series. More than one (1) tank or wastewater treatment unit may be exhausted through a single carbon adsorption system.

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

Permittee Tank Designation	Description	Nominal Capacity (gallons)
T-301	API Oil/Water Separator	5,000
T-302	API Oil/Water Separator	5,000
T-303	Wastewater Influent Sump	1,000
T-304	Wastewater Influent Sump	1,000
T-305	Organic Skim Tank	5,000
T-306	Organic Tank	5,000
T-324	Organic Material (VOC) Storage	12,000
T-325	Organic Material -Toluene Byproduct (VOC) Storage	12,000
T-339	Organic Material (VOC) Storage	16,300
T-340	Primary WWT Sludge Storage	10,000
T-342	Primary WWT Clarifier Overflow Tank	1,000
T-343	Primary WWT Surge Tank	20,500

- (10) For each carbon adsorption system required by this permit, the following shall apply:
- (a) At least once per calendar month the Permittee shall measure the concentration of VOC in the gas streams at the inlet and outlet of the first (upstream) carbon canister in the series of canisters. The Permittee shall make all required measurements with a VOC detector that is calibrated and operated in accordance with vendor specifications and recommendations;
 - (b) Either prior to "breakthrough" or when "breakthrough" is first detected, the Permittee shall replace the first carbon canister with the second carbon canister in the series, and shall install a "new" second carbon canister that contains new or regenerated carbon. "Breakthrough" shall be defined as the circumstance when the concentration of VOC in the gas stream at the outlet of the canister becomes greater than 15 percent of the concentration at the inlet; and
 - (c) The Permittee shall maintain on site at least one (1) replacement carbon canister (containing either new or regenerated carbon) at all times for each carbon adsorption system required by this permit.
- (11) Other than tanks listed in Part E of this permit, the Permittee shall not have on site any storage tank for which a permit-to-construct is required.

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

Part D – Monitoring, Record Keeping and Reporting

- (1) Whenever the RTO is used to control emissions from the ester manufacturing plant the Permittee shall continuously monitor and record the temperature of the combustion zone of the RTO.
- (2) The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, records of the following information:
 - (a) Facility-wide emissions of NO_x, SO_x, the individual HAP with greatest emissions, and the combined total of all HAPs, (actual tons per calendar month and actual tons for each period of 12 consecutive months);
 - (b) Fuel oil supplier certificates of analysis that provide the sulfur content of all residual and distillate fuel oils delivered to the plant;
 - (c) Used oil supplier certificates of analysis that provide the flash point of any used oil accepted at the site, and that provide the concentrations in the used oil (in ppm by weight) of PCB, total halogens, lead, arsenic, cadmium, and chromium;
 - (d) All required recordation of the temperature of the combustion zone of the RTO;
 - (e) Information concerning measurements required by this permit of VOC concentrations at the inlet and outlet of carbon canisters. Such information shall include identification of the canister tested, the dates on which the testing was conducted, the value in ppmv of each VOC concentration determined, the dates on which carbon canisters were replaced, and the location of each replacement canister;
 - (f) All written descriptions of "good operating practices" designed to minimize emissions of VOC; and
 - (g) VOC leak detection and repair logs that include identification of the persons who conducted the leak detection inspections, the dates on which the inspections were conducted, the findings during the inspections, a listing by tag identification number and a description of all leaks discovered, and the date and nature of all leak repairs effected.

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001

- (3) In accordance with 40 CFR 60, Subpart Kb, §116b(b) and (c), for any volatile organic liquid (VOL) storage vessel with a design capacity greater than or equal to 75 m³ (19,815 gal) but less than 151 m³ (39,894.2 gal) storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa (2.176 psi) the Permittee shall maintain readily accessible records showing the dimensions of the storage vessel, an analysis showing the capacity of the storage vessel, a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.
- (4) The Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, records necessary to support annual certifications of emissions and demonstrations of compliance for toxic air pollutants. Such records shall include, if applicable, the following:
- (a) mass emissions rates for each regulated pollutant, and the total mass emissions rate for all regulated pollutants for each registered source of emissions;
 - (b) accounts of the methods and assumptions used to quantify emissions;
 - (c) all operating data, including operating schedules and production data, that were used in determinations of emissions;
 - (d) amounts, types, and analyses of all fuels used;
 - (e) any records, the maintenance of which is required by this permit or by State or federal regulations, that pertain to the operation and maintenance of continuous emissions monitors, including:
 - (i) all emissions data generated by such monitors;
 - (ii) all monitor calibration data;
 - (iii) information regarding the percentage of time each monitor was available for service; and
 - (iv) information concerning any equipment malfunctions;
 - (f) Information concerning operation, maintenance, and performance of air pollution control equipment and compliance monitoring equipment, including:
 - (i) identifications and descriptions of all such equipment;

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

- (ii) operating schedules for each item of such equipment;
 - (iii) accounts of any significant maintenance performed;
 - (iv) accounts of all malfunctions and outages; and
 - (v) accounts of any episodes of reduced efficiency;
 - (g) limitations on source operation or any work practice standards that significantly affect emissions; and
 - (h) other relevant information as required by the Department.
- (5) The Permittee shall submit to the Department by April 1 of each year a certification of emissions for the previous calendar year. The certifications shall be prepared in accordance with requirements, as applicable, adopted under COMAR 26.11.01.05 – 1 and COMAR 26.11.02.19D.
- (a) Certifications of emissions shall be submitted on forms obtained from the Department.
 - (b) A certification of emissions shall include mass emissions rates for each regulated pollutant, and the total mass emissions rate for all regulated pollutants for each of the facility's registered sources of emissions.
 - (c) The person responsible for a certification of emissions shall certify the submittal to the Department in the following manner:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
- (6) The Permittee shall submit to the Department by April 1 of each year a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. Such analysis shall include either:

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

- (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
 - (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.
- (7) The Permittee shall report, in accordance with requirements under COMAR 26.11.01.07, occurrences of excess emissions to the Compliance Program of the Air and Radiation Management Administration.

**Part E – Identification of Bulk Storage Tanks, and
Identification of Tanks, Surface Impoundments (Ponds) and
Processing Units Associated with Wastewater Treatment**

**Table E-1: Bulk Storage Tanks
(Does not include tanks associated with wastewater treatment or fire protection)**

Tank No.	Capacity	Installation Date	Storage Service	Control Device	Notes
T-1	12,000	1960	Low Vapor Pressure (LVP) Organics		
T-3	5,000	1962	LVP Organics		
T-4	5,000	1962	LVP Organics		
T-5	5,000	1962	LVP Organics		
T-6	5,000	1962	LVP Organics		
T-7	10,200	1960	LVP Organics		
T-8	11,600	1960	LVP Organics		
T-9	1,600	1960	LVP Organics		
T-10	4,800		LVP Organics		
T-12	11,600	1962	LVP Organics		
T-13	14,700	1960	LVP Organics		
T-14	5,000	1962	LVP Organics		
T-15	5,000	1962	LVP Organics		
T-16	5,000	1962	LVP Organics		
T-17	15,000	1962	LVP Organics		
T-18	2,500	1962	LVP Organics		
T-19	2,500	1962	LVP Organics		
T-20	27,500	1967	LVP Organics		
T-21	27,500	1967	LVP Organics		
T-22	27,500	1967	LVP Organics		

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

Tank No.	Capacity	Installation Date	Storage Service	Control Device	Notes
T-23	53,000	1962	LVP Organics		
T-24	53,000	1962	LVP Organics		
T-25	30,000	1967	Organic Material (VOC)		
T-25B	30,000	2007	Organic Material (VOC)		
T-26	200,000	1969	LVP Organics		
T-27	200,000	1969	LVP Organics		
T-28	200,000	1969	LVP Organics		
T-29	200,000	1969	LVP Organics		
T-30	30,000	1962	LVP Organics		
T-32	12,000	1962	Organic Material (VOC)		
T-33	7,600	1962	LVP Organics		
T-34	30,000	1962	LVP Organics		
T-35	5,100	1962	LVP Organics		
T-36	11,000	1967	LVP Organics		
T-37	42,075	1981	LVP Organics		
T-39	12,000	1972	LVP Organics		
T-40	12,000	1972	LVP Organics		
T-41	12,000	1967	LVP Organics		
T-42	30,000	1988	LVP Organics		
T-43	30,000	1988	LVP Organics		
T-44	30,000	1988	LVP Organics		
T-45	30,000	1988	LVP Organics		
T-46	30,000	1988	LVP Organics		
T-47	30,000	1988	LVP Organics		
T-48	30,000	1988	LVP Organics		
T-49	30,000	1988	LVP Organics		
T-50	30,000	1988	LVP Organics		
T-51	30,000	1988	LVP Organics		
T-52	30,000	1988	LVP Organics		
T-54	15,000	1996	LVP Organics		
T-55	15,000	1996	LVP Organics		
T-56	16,000	1967	LVP Organics		
T-57	3,000	1960	LVP Organics		
T-58	3,000	1960	LVP Organics		
T-59	3,000	1960	LVP Organics		
T-60	3,000	1960	LVP Organics		
T-61	5,000	1960	Organic Material (VOC)		
T-62	12,000	1967	LVP Organics		
T-63	12,000	1967	LVP Organics		
T-64	21,400	1985	LVP Organics		

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

Tank No.	Capacity	Installation Date	Storage Service	Control Device	Notes
T-70	10,000	1967	LVP Organics		
T-71	10,000	1967	LVP Organics		
T-72	10,000	1967	LVP Organics		
T-73	10,000	1967	LVP Organics		
T-74	25,000	1967	LVP Organics		
T-75	25,000	1967	LVP Organics		
T-76	5,000	1967	LVP Organics		
T-77	5,000	1967	LVP Organics		
T-78	20,000	1967	Organic Material (VOC)		
T-79	20,000	1967	LVP Organics		
T-80	12,000	1969	LVP Organics		
T-81	12,000	1969	LVP Organics		
T-82	12,000	1969	LVP Organics		
T-83	12,000	1969	LVP Organics		
T-85	12,000	1969	LVP Organics		
T-86	12,000	1969	LVP Organics		
T-87	10,000	1969	LVP Organics		
T-88	10,000	1969	LVP Organics		
T-89	29,500	1987	LVP Organics		
T-90	29,500	1987	LVP Organics		
T-91	29,500	1987	LVP Organics		
T-92	29,500	1990	LVP Organics		
T-93	20,000	1969	LVP Organics		
T-94	20,000	1969	LVP Organics		
T-201	67,000	1967	LVP Organics		
T-202	67,000	1967	LVP Organics		
T-203	67,000	1967	LVP Organics		
T-204	67,000	1967	LVP Organics		
T-205	67,000	1967	LVP Organics		
T-206	67,000	1967	LVP Organics		
T-207	67,000	1967	LVP Organics		
T-208	67,000	1967	LVP Organics		
T-209	6,300	1967	LVP Organics		
T-211	150,000	1969	LVP Organics		
T-212	150,000	1969	LVP Organics		
T-213	150,000	1969	LVP Organics		
T-214	100,000	1972	LVP Organics		
T-215	100,000	1972	LVP Organics		
T-322	10,200	1960	Organic Material (VOC)		
T-323	10,200	1960	Organic Material (VOC)		

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

Tank No.	Capacity	Installation Date	Storage Service	Control Device	Notes
T-324	12,000	1967	Organic Material (VOC)	Carbon Canisters	Required to be equipped with carbon canisters
T-325	12,000	1967	Organic Material (VOC)	Carbon Canisters	Required to be equipped with carbon canisters
T-326	40,000		Fuel Oil or Used Oil Storage		
T-327	500	1967	Potable H ₂ O Head Tank		Well water
T-328	20,000	1967	Potable H ₂ O Surge Tank		Potable water (T-327 well water) that goes through sand and polishing filters)
T-331	15,000		Cooling Tower Water (CTW) Heat Sink		
T-332	15,000		CTW Heat Sink		
T-334	250	1969	Diesel Fuel For Fire Pump		
T-335	275	1972	Diesel Fuel For Emergency Generators		
T-336	5,000	1969	Cooling Tower and Boiler Blow Down Tank		
T-338	500	1982	Diesel Fuel for Plant Vehicles		
T-339	16,300	1985	Organic Material (VOC)	Carbon Canisters	Required to be equipped with carbon canisters
T-601	30,000	1990	Organic Material (VOC)	Carbon Canisters	Carbon canisters optional
T-602	20,000	1990	Organic Material (VOC)	Carbon Canisters	Carbon canisters optional
T-603	20,000	1990	LVP Organics		
T-604	12,000	1990	Organic Material (VOC)	Carbon Canisters	Carbon canisters optional
T-605	30,000	1990	LVP Organics		
T-606	25,000	1990	LVP Organics		
T-607	25,000	1990	LVP Organics		
T-608	40,000	1990	LVP Organics		
T-609	40,000	1990	LVP Organics		
T-611	40,000	1990	LVP Organics		

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

**Table E-2: Tanks and Surface Impoundments (Ponds) Associated With
Wastewater Treatment and Fire Protection⁽¹⁾**

Tank or Pond No.	Type⁽²⁾	Capacity	Storage Service	Control Device	Notes
301	V, R	5,000	API oil/water separator	Carbon Canisters	Required to be equipped with carbon canisters
302	V, R	5,000	API oil/water separator	Carbon Canisters	Required to be equipped with carbon canisters
303	V	1,000	influent sump	Carbon Canisters	Required to be equipped with carbon canisters
304	V	1,000	influent sump	Carbon Canisters	Required to be equipped with carbon canisters
305	H Tank	5,000	organic skimming	Carbon Canisters	Required to be equipped with carbon canisters
306	V Tank	5,000	organic skimming	Carbon Canisters	Required to be equipped with carbon canisters
307	Pond	300,000	Fire Protection		
311	Sump	3,500	Outfall Sump		
312	Pond	10 Acres	Effluent Pond E – Rt 297		
316	Pond	221,713	Diluted Water Pond		
318	V tank	200,000	WWT Surge Tank		
340	V, CB Tank	10,000	1° WWT Sludge Storage	Carbon Canisters	Required to be equipped with carbon canisters
341	V, OT Tank	55,000	1° WWT Clarifier		
342	V Tank	1,000	1° WWT Clarifier Overflow Tank	Carbon Canisters	Required to be equipped with carbon canisters
343	V Tank	20,500	1° WWT Surge Tank	Carbon Canisters	Required to be equipped with carbon canisters
350	V Tank	1,400	Venturi Scrubber Tank		
358	V, OT Tank	328,000	Conc. WW Equalization		
360	V, OT Tank	496,418	2° WWT Bio Reactor		
361	V, OT, CB Tank	51,400	2° WWT Clarifier		
362	V, CB Tank	32,900	2° WWT Thickener		

**GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NUMBER 029-0001**

Tank or Pond No.	Type⁽²⁾	Capacity	Storage Service	Control Device	Notes
363	V, CB Tank	5,000	2° WWT Recycle Tank		
364	V Tank	50	Phosphate Nutrient Tank		

⁽¹⁾ Surface impoundments (ponds) 313 and 315 (176,796 gallons and 146,392 gallons, respectively) were formerly used as effluent surge ponds in the facility's wastewater treatment plant, and as such were formerly listed in Table E-2 above, but in accordance with a Consent Decree executed with MDE's Water Management Administration the Permittee removed the two ponds from such service (as of April 4, 2008), and currently these ponds inventory only rain water; therefore these two ponds are no longer listed in Table E-2 of this permit.

⁽²⁾ Abbreviations: V = vertical tank, H = horizontal tank, R = rectangular, CB = cone bottom, OT = open top, 1° = primary, 2° = secondary

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

1800 Washington Boulevard • Baltimore MD 21230

410-537-3000 • 1-800-633-6101

Martin O'Malley
GovernorShari T. Wilson
SecretaryAnthony G. Brown
Lieutenant Governor**DEC - 2 2008**Robert M. Summers, Ph.D.
Deputy Secretary

Ms. Joanne K. Szymanski, EHS Coordinator
Genovique Specialties Corporation
10380 Worton Road
Chestertown MD 21620

Dear Ms. Szymanski:

Enclosed is a facility-wide permit-to-construct for the Genovique Specialties Corporation (Genovique) facility located near Chestertown in Kent County, Maryland. The permit supersedes all Maryland Department of the Environment (MDE), Air and Radiation Management Administration (ARMA) permits-to-construct issued to previous owners of the facility. The permit contains both general conditions, which apply to all air quality permit holders in Maryland, and specific conditions, which apply to the installations at your facility.

The permit also includes limitations on premises-wide emissions so that the Genovique facility may be recognized as a synthetic minor source with respect to emissions of nitrogen oxides (NO_x), sulfur oxides (SO_x) and hazardous air pollutants (HAP). Such status as a synthetic minor precludes applicability of Part 70 (Title V) requirements of the Clean Air Act to the facility. The facility will be recognized as a synthetic minor source so long as the facility complies with the emissions limitations or until status as a synthetic minor source is no longer required.

If you have any questions regarding the issuance of this permit, please contact Mr. Ross Oliver of my staff at (410) 537-3931.

Sincerely,

Karen G. Irons, P.E., Administrator
Air Quality Permits Program
Air and Radiation Management Administration

KGI/aw

Enclosure

OCT 10 2008

APPLICATION FOR STATE PERMIT TO OPERATE
FOR CHANGE OF OWNERSHIP
AIR AND RADIATION MANAGEMENT ADMINISTRATION

AI# 2107

Owner Information:

Name of Owner or Operator: Genovique Specialties Corporation		
Street Address: 10380 WORTON ROAD		
City: Chestertown	State: MD	Zip Code: 21620
Telephone Number: 410-778-1991		Fax Number: 410-778-5538

Facility Information:

Name of Facility: Genovique Specialties Corporation		Premises (Permit) Number: 029-00001
Street Address: 10380 WORTON ROAD		
City: Chestertown	State: MD	Zip Code: 21620
Plant Manager: Joe Morrison	Telephone Number: 410-778-1991 x230	Fax Number: 410-778-5538
24-Hour Emergency Telephone Number for Air Pollution Matters: 410-778-1991		
Contact for Permit Issues: JOANNE SZYMANSKI	Title: EHS Manager	
Telephone Number: 410-778-1991 x252	E-Mail Address: jszymanski@genovique.com	



MARYLAND DEPARTMENT OF THE ENVIRONMENT

2. Complete the following information:

Date when purchased company: 5/31/2005 10/1/2008
Previous owner's name: Velsicol Chemical Corporation
Primary business activity at purchased location: ESTER Manufacturing
NAICS or SIC (if known) 325199
Facility Contact (Include name, position & telephone number): Joanne Szymanski
EHS Manager 410-778-1991 x252

3. Equipment Inventory

Attached and incorporated by reference as part of this application, is a current list of registered equipment at this facility. Please review and confirm the operational status of indicated equipment. If a piece of equipment is not on site, please note date of removal if known.

4. Certification by Responsible Official:

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision and in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

RESPONSIBLE OFFICIAL:

X Joe Morrison 10/6/08
SIGNATURE DATE
Joe Morrison
PRINTED NAME
Plant Manager
TITLE



**GENOVIQUE SPECIALTIES CORPORATION
STATE PERMIT TO OPERATE #029-00001**

This permit was issued to cover the following registrations. Please indicate **OPERATIONAL STATUS** using codes found at the bottom of this page.

Registration No.	Description	Date of Installation	Operational Status Upon Change of Ownership (See codes below)
4-0074	One (1) Boiler (Permittee designation 250 C.B. boiler), rated at 10.5 MMBtu/hr heat input, fired with residual and distillate fuel oils, waste combustible fluids (WCF), and used oils.	01/1960	A
4-0075	One (1) Boiler (Permittee designation 700 C.B. boiler), rated at 29.3 MMBtu/hr heat input, fired with residual and distillate fuel oils, and used oils.	01/1968	A
6-0010	One (1) Hot Oil Heater (Permittee no. 2), rated at 15 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF, and used oils.	01/1974	A
6-0011	One (1) Hot Oil Heater (Permittee no. 3), rated at 14 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF, and used oils.	01/1968	A
6-0012	One (1) Hot Oil Heater (Permittee no. 1), rated at 10 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF, and used oils.	01/1967	A
7-0018	Equipment associated with one (1) esterification process as registered with the Department, including three (3) process reactors (Permittee designations K-121, K-127, and K-132) controlled by a regenerative thermal oxidizer (RTO) with a water scrubber for back-up control when the RTO cannot be operated.	01/1960	A
9-0010	One (1) wastewater treatment plant including an oil/water separator, clarifiers, an equalization tank, a bioreactor, a sludge dewatering unit, and other equipment as listed in Table E-2 under Part E of this permit.	01/1960	A
9-0013	One (1) tank farm comprising bulk storage tanks as listed in Table E-1 under Part E of this permit.	01/1960	A

OPERATIONAL STATUS CODES

- (A) Active
- (D) Permanently shut down
- (P) Partially shut down (Describe)
- (I) Inactive
- (R) Will replace (Note a Permit to Construct is required before replacing)



MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

Martin O'Malley
Governor

September 25, 2008

Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Deputy Secretary

Ms. Elizabeth A. Karkula
Velsicol Chemical Corporation
10400 W. Higgins Road
Suite 600
Rosemont, IL 60018-3713

Reference: Permit No. 029-00001

Dear Ms. Karkula:

Thank you for notifying the Department of the change in ownership from Velsicol Chemical Corporation to Genovique Specialties Corporation, an ester (plasticizer) manufacturing facility located at 10380 Worton Road in Chestertown, Maryland. Enclosed please find an application form to transfer the current State Permit to Operate to the new owner. In addition to the application form, there is an attachment to be used to re-register the equipment/processes at the facility. Maryland air quality regulations found at COMAR 26.11.02.02A(2) state that a new owner shall register the source with the Department within 30 days of the change of ownership.

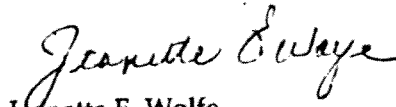
Please complete the application form to transfer the current Permit to Operate to the new owner and update the operational status of the equipment/processes that will occur upon the ownership change. Please indicate any changes in the column provided using the operational status codes at the bottom of the page. Note that if the new owner plans to replace equipment or add additional equipment, an application for a Permit to Construct (PTC) and issuance of the PTC by the Department may be required prior to installing new equipment. A permit is not required to shut down and/or remove equipment. If the new owner plans to make changes to a process line by removing one or more pieces from the operation, please describe the change so that the Department's registration information can be updated.

There is no fee for transferring the State Permit to Operate or for re-registering the source. There is an annual Permit to Operate fee that is due on the anniversary month of the permit, which for this facility is December 31. The amount of the annual fee is calculated by adding a \$200 base fee to an emissions-based component that relates to the quantity of certified emissions of regulated air pollutants from the operation of the facility. In the future, Genovique will be billed for the annual fee 60 days prior to the due date of the fee. The next invoice will be mailed to Genovique by November 1, 2008 and will be due December 31, 2008.

Page 2

Please note that this facility is not a Title V source as indicated in your letter of September 23, 2008. If you have any questions concerning the application form or registration process, please feel free to contact the permit engineer assigned to this facility, Mr. Ross Oliver at (410) 537-3225.

Sincerely,

A handwritten signature in cursive script, reading "Jeanette E. Wolfe".

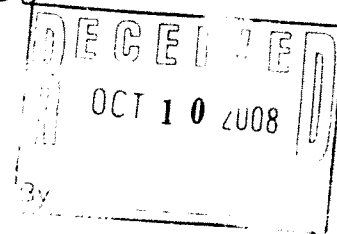
Jeanette E. Wolfe
Permits Coordinator
Air Quality Permits Program
Air & Radiation Management Administration

Enclosures

cc: Judy Ciulis, VCC
Ross Oliver, Air Quality Permits Program



Target Draft Due Date:
12/20/08



ELIZABETH A. KARKULA
GENERAL COUNSEL & CORPORATE SECRETARY
GENOVIQUE SPECIALTIES CORPORATION
10400 W. HIGGINS RD. SUITE 600
ROSEMONT, IL 60018
PH (847) 635-3479
FX (847) 298-0415
E-Mail ekarkula@genovique.com

October 8, 2008

Ms. Jeanette Wolfe
Permits Coordinator
Maryland Department of the Environment
Air and Radiation Management Administration Suite 720
1800 Washington Boulevard
Baltimore, MD 21230

RE: Notification of Change; Permit Number 029-00001
Genovique Specialties Corporation @ 10380 Worton Rd., Chestertown, MD
21620

Dear Ms. Wolfe:

Pursuant to Maryland air quality regulations found at COMAR 26.11.02.02A(2) stating that a new owner shall register the source with the Department within 30 days of the change of ownership, Genovique Specialties Corporation hereby submits an Application for State Permit to Operate for Change of Ownership for its Chestertown, Maryland plant.

If you have any questions regarding this matter, please contact Judy Ciulis at 901-320-0293.

Sincerely,
Genovique Specialties Corporation



Elizabeth A. Karkula
General Counsel & Corporate Secretary

cc: Judy Ciulis, VC LLC



MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard • Baltimore Maryland 21230
(410) 537-3000 • 1-800-633-6101 • <http://www.mde.state.md.us>

Martin O'Malley
Governor

Shari T. Wilson
Secretary

Anthony G. Brown
Lt. Governor

Robert M. Summers, P.D.
Deputy Secretary

TO: File, Genovique Specialties Corporation (029 – 0001), formerly Velsicol Chemical Corporation

FROM: Ross Oliver, ^{RAO} ARMA Permits Program

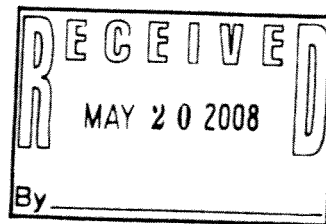
DATE: October 20, 2008

SUBJECT: Re-issue of facility-wide permit-to-construct under new ownership name

Effective October 1, 2008 Genovique Specialties Corporation became the new owner of the Velsicol Chemical Corporation facility located near Chestertown in Kent County, Maryland. The subject permit-to-construct is a facility-wide permit to be issued under the name of the new owner. The permit would supersede all previous permits-to-construct issued for the premises. The only changes from currently effective PTC provisions would be as follows:

- The permit would be issued under the name Genovique Specialties Corporation;
- COMAR 26.11.06.03B(1) would be added to the list of applicable regulations. This regulation is cited in PTC 029 – 7 – 0018M, which was issued to Velsicol on August 9, 2007 to authorize installation of one Benzoflex® ester flaking and packaging unit in the facility's ester manufacturing plant;
- In accordance with the company's letter of May 12, 2008:
 - Table E-1 would be updated to include new bulk storage tank T-25B, which is similar to tank T-25 with regard to capacity and storage service. The new tank qualifies for a "de minimus" exemption from PTC requirements; and
 - Surface impoundments (ponds) 313 and 315 (176,796 gallons and 146,392 gallons, respectively) would be removed from Table E-2. These two unlined ponds were formerly used as effluent surge ponds in the facility's wastewater treatment plant, and as such were formerly listed in Table E-2, but in accordance with a Consent Decree executed with MDE's Water Management Administration the Permittee removed the two ponds from wastewater treatment service (as of April 4, 2008), and currently these ponds inventory only rain water.

"Together We Can Clean Up"



May 12, 2008

Ross Oliver
Maryland Department of the Environment
Air and Radiation Management Administration
Air Quality Permits Program
1800 Washington Blvd., Suite 715
Baltimore, MD 21230

Dear Mr. Oliver,

This letter provides notification to the department of Velsicol Chemical Corporation's request to revise the facility's Permit-To-Operate, Permit No. 029-00001, within regards to Part E, Table E-1, Bulk Storage Tanks and Table E-2, Tanks and Ponds Associated with Wastewater Treatment and Fire Pond Protection.

Please add T-25B to Part E, Table E-1 and remove Ponds 313 and 315 from Part E, Table E-2.

T-25A is a 30,000 gallon tank, installed in 2007, for the storage of organic material. The Department had already determined that this new tank would not require a Permit-To-Construct nor modification to this facility's Permit-To-Operate as communicated in your letter dated March 27, 2007.

Ponds 313 and 315's service as part of the facility's Wastewater Treatment System has been terminated, effective April 4, 2008.

Please let me know if you have any questions or require additional information. I can be contacted at 410-778-1991, ext. 252.

Sincerely,

Joanne K. Szymanski
Environmental, Health and Safety Manager

CC: Greg Franzoni, Maryland Department of the Environment, Air and Radiation Management Administration, Air Quality Compliance Program, Baltimore, MD

Randy Denny, Maryland Department of the Environment, Water Management
Administration, Cambridge, MD

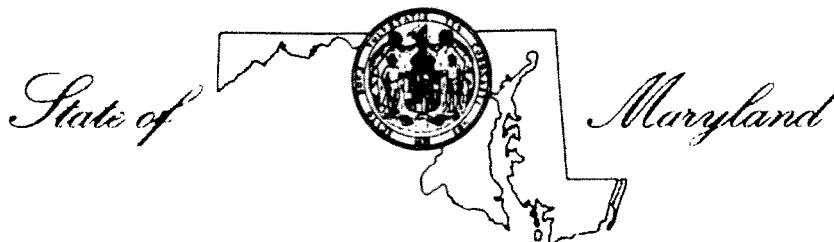
Joe Morrison, Plant Manager, Velsicol Chemical Corporation, Chestertown, MD

January 1, 2009

Operating Permit

KEEP PERMIT AT SITE

CONTROL NO. B- 02070



Martin O' Malley
Governor

Shari T. Wilson
Secretary

DEPARTMENT OF THE ENVIRONMENT

Air and Radiation Management Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

☐ Construction Permit

☒ Operating Permit

PERMIT NO. 029-0001

DATE ISSUED January 1, 2009

PERMIT FEE To Be Paid in Accordance
with COMAR 26.11.02.19B

EXPIRATION DATE December 31, 2013

LEGAL OWNER & ADDRESS

Genovique Specialties Corporation
10380 Worton Road
Chestertown MD 21620
Attn: Ms. Joanne K. Szymanski

SITE

Genovique Specialties Corporation
10380 Worton Road
Chestertown MD 21620
KENT County
AI# - 2107

SOURCE DESCRIPTION

One (1) ester (plasticizer) manufacturing plant.

This permit includes limitations on premises-wide emissions so as to establish the Genovique Specialties Corporation, Kent County facility as a synthetic minor source with respect to Title V of the Federal Clean Act and with respect to potentially applicable standards promulgated under 40 CFR 63.

This source is subject to the conditions described on the attached pages.

Page 1 of 19

Program Manager

Director, Air and Radiation Management Administration

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

INDEX

Part A – General Provisions
Part B – Applicable Regulations
Part C – Operational and Testing Requirements
Part D – Monitoring, Record Keeping and Reporting
Part E – Listing of Tanks, Surface Impoundments (Ponds) and Equipment Associated with Bulk Storage, Wastewater Treatment and Fire Protection

This permit-to-operate incorporates requirements for the following registered installations:

ARMA Registration Number	Description	Date of Installation
029-0001-4-0074	One (1) Boiler (Permittee designation 250 C.B. boiler), rated at 10.5 MMBtu/hr heat input, fired with residual and distillate fuel oils, waste combustible fluids (WCF), and used oils.	01/1960
029-0001-4-0075	One (1) Boiler (Permittee designation 700 C.B. boiler), rated at 29.3 MMBtu/hr heat input, fired with residual and distillate fuel oils, and used oils.	01/1968
029-0001-6-0010	One (1) Hot Oil Heater (Permittee no. 2), rated at 15 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF, and used oils.	01/1974
029-0001-6-0011	One (1) Hot Oil Heater (Permittee no. 3), rated at 14 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF, and used oils.	01/1968
029-0001-6-0012	One (1) Hot Oil Heater (Permittee no. 1), rated at 10 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF, and used oils.	01/1967
029-0001-7-0018	Equipment associated with one (1) esterification process as registered with the Department, including three (3) process reactors (Permittee designations K-121, K-127, and K-132) controlled by a regenerative thermal oxidizer (RTO) with a water scrubber for back-up control when the RTO cannot be operated.	01/1960
029-0001-9-0010	One (1) wastewater treatment plant including an oil/water separator, clarifiers, an equalization tank, a bioreactor, a sludge de-watering unit, and other equipment as listed in Table E-2 under Part E of this permit.	01/1960

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

029-0001-9-0013	One (1) tank farm comprising bulk storage tanks as listed in Table E-1 under Part E of this permit.	01/1960
-----------------	---	---------

Part A – General Provisions

- (1) The application (Form MDE/ARMA/PER.021) received at the Department on October 10, 2008 for a State permit-to-operate for new ownership is incorporated into this permit by reference. If there are any conflicts between representations in the application and representations in this permit, the representations in the permit shall govern. Estimates of dimensions, volumes, emissions rates, operating rates, feed rates and hours of operation included in the application for renewal do not constitute enforceable numeric limits beyond the extent necessary for compliance with applicable requirements.
- (2) Upon presentation of credentials, representatives of the Maryland Department of the Environment ("MDE" or the "Department:") and the Kent County Health Department shall at any reasonable time be granted, without delay and without prior notification, access to the Permittee's property and permitted to:
 - (a) determine compliance with the requirements of this permit and any applicable regulations;
 - (b) sample, as necessary to determine compliance with requirements of this permit and applicable regulations, any materials stored or processed on site, any waste materials, and any discharge into the environment;
 - (c) inspect any monitoring equipment required by applicable regulations or by any permit issued by the Department's Air and Radiation Management Administration;
 - (d) review and copy any records, including all documents required to be maintained by this permit and by applicable regulations, relevant to the Department's determination of compliance with an air pollution control requirement; and
 - (e) obtain any photographic documentation or evidence necessary to determine compliance with the requirements of this permit and applicable regulations.
- (3) If any provision of this permit is declared by proper authority to be invalid, the remaining provisions of the permit shall remain in effect.
- (4) Nothing in this permit authorizes the violation of any rule or regulation or the creation of a nuisance or air pollution.

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

Part B – Applicable Regulations

- (1) This source is subject to all applicable federal air pollution control requirements including, but not limited to, all applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source Performance Standards (NSPS) promulgated under 40 CFR 60, Subparts A and Kb for volatile organic liquid storage vessels.

All reports and notifications required under 40 CFR 60, Subpart(s) A and Kb shall be submitted to the Compliance Program of the Department's Air and Radiation Management Administration.

- (2) This source is subject to all applicable federally enforceable State air pollution control requirements including, but not limited to, the following regulations:
- (a) COMAR 26.11.01.07C, which requires that the Permittee report to the Department occurrences of excess emissions.
 - (b) COMAR 26.11.02.09A, which requires that the Permittee obtain a permit-to-construct if an installation is to be modified in manner that would cause a change in the quantity, nature, or characteristics of emissions referenced in the permit-to-construct issued for that installation.
 - (c) COMAR 26.11.06.02C(1), which limits visible emissions other than uncombined water to not more than 20% opacity.
 - (d) COMAR 26.11.06.03B(1), which limits the concentration of particulate matter in any exhaust gases to not more than 0.05 grains per standard cubic foot of dry exhaust gas (gr/scfd).
 - (e) COMAR 26.11.09.05A(1), which limits visible emissions, other than uncombined water, from fuel burning equipment to not more than 20% opacity.
 - (f) COMAR 26.11.09.06A(1), which prohibits the discharge to atmosphere of particulate matter from fuel burning equipment constructed before January 17, 1972 in excess of the amounts shown in Figure 1 under COMAR 26.11.09.09.
 - (g) COMAR 26.11.09.06A(2), which prohibits the discharge to atmosphere of particulate matter from fuel burning equipment constructed on or after January 17, 1972 in excess of the amounts shown in Figure 2 under COMAR 26.11.09.09.

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

- (h) COMAR 26.11.09.07A(1)(b), which limits the sulfur content of residual fuel oil to not more than 2 percent by weight.
- (i) COMAR 26.11.09.07A(1)(c), which limits the sulfur content of distillate fuel oil to not more than 0.3 percent by weight.
- (j) COMAR 26.11.19.02I, which requires that the Permittee establish in writing and implement facility-wide "good operating practices" designed to minimize emissions of VOC.
- (k) COMAR 26.11.19.16, which requires that the Permittee implement a VOC leak detection and repair program designed to minimize unintended emissions of VOC from process equipment and components, e.g., in-process vessels, storage tanks, pumps, compressors, valves, flanges and other pipeline fittings, pressure relief valves, process drains, and open-ended pipes.
- (l) COMAR 26.11.19.30, which requires that the Permittee control emissions of volatile organic compounds (VOC) from organic and inorganic chemical production operations, and includes the following requirements for facilities that discharge total uncontrolled VOC emissions of 100 or more pounds per day:
 - (i) The Permittee shall duct each process vent and exhaust line from any installation with actual emissions of 20 pounds or more per day into a control device that has an overall VOC destruction or removal efficiency of at least 90 percent.
 - (ii) If the Permittee cannot achieve compliance because of an unavoidable outage or malfunction of the primary control device, the Permittee shall either:
 - a. discontinue operation until the primary control device is returned to proper service; or
 - b. use a back-up control device that is approved by the Department.
 - (iii) The back-up control device may not be used more than 10 percent of the annual operating time of the affected installation during any calendar year unless a longer period is approved by the Department.
- (3) This source is subject to all applicable State-only enforceable air pollution control requirements including, but not limited to, the following regulations:

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

- (a) COMAR 26.11.02.13A(16), which requires that the Permittee maintain and renew as required a valid State permit-to-operate issued by the Department.
- (b) COMAR 26.11.02.14D, which requires that the Permittee submit to the Department not later than 60 days prior to expiration of this permit a completed application for renewal.
- (c) COMAR 26.11.02.19C & D, which require that the Permittee submit to the Department annual certifications of emissions, and that the Permittee maintain sufficient records to support the emissions information presented in such submittals.
- (d) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
- (e) COMAR 26.11.09.10, which establishes requirements concerning use of used oils and waste combustible fluids as fuel.
- (f) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.
- (g) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions would unreasonably endanger human health.

Part C – Operational and Testing Requirements

- (1) The Permittee shall maintain and operate all installations and associated air pollution control equipment so as to assure full and continuous compliance with all applicable air pollution control regulations and permit conditions.
- (2) The Permittee shall properly maintain, calibrate, and operate all control panel instrumentation and all devices employed to monitor performance of the facility's air pollution control devices.
- (3) Unless the Permittee obtains from the Department written authorization otherwise, the Permittee shall limit air emissions in accordance with the following:
 - (a) Facility-wide emissions of nitrogen oxides (NO_x) shall be less than 100 tons in all periods of 12 consecutive months;
 - (b) Facility-wide emissions of sulfur oxides (SO_x) shall be less than 100 tons in all periods of 12 consecutive months; and

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

- (c) Facility-wide emissions of hazardous air pollutants (HAP) shall be less than 10 tons for each individual HAP, and shall be less than 25 tons for the combined total of all HAPs, in all periods of 12 consecutive months.
- (4) In accordance with COMAR 26.11.19.02I, the Permittee shall implement "good operating practices" designed to minimize emissions of VOC to the atmosphere.
 - (a) Where applicable, "good operating practices" shall include, at a minimum:
 - (i) Provisions for training operators with regard to practices, procedures, and maintenance requirements that are consistent with equipment manufacturers' recommendations, and with requirements dictated by the Permittee's experiences with operation of equipment. The training shall include material concerning proper maintenance procedures for air pollution control equipment;
 - (ii) Maintenance of covers on containers and other vessels that are not in use and that contain VOC or VOC-bearing materials;
 - (iii) Scheduling operations as much as practical to minimize color changes and other material changes when applying VOC-bearing materials by spray application;
 - (iv) Where practical, using high-volume-low-pressure (HVLP) spray applicators or other high efficiency application methods for spray application of VOC-bearing materials; and
 - (v) Mixing and blending VOC-bearing materials as much as practical in closed containers, and implementing preventive measures designed to minimize emissions from products that contain VOC.
 - (b) "Good operating practices" shall be established in writing, shall be made available to the Department upon request, and shall be either included as part of an operator training program or posted where clearly visible to operators.
 - (c) The Permittee shall take all reasonable precautions to prevent or minimize the discharge of VOC into the atmosphere when cleaning process equipment and coating application equipment, including containers, vessels, tanks, lines, spray application devices, and pumps. Reasonable precautions for equipment cleanup shall include, at a minimum:
 - (i) Storing all waste materials, including VOC-contaminated cloth and paper, in closed containers;

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

- (ii) For frequently cleaned equipment, preparing written standard operating procedures that include, wherever practical, provisions for using non-VOC or low-VOC cleaning agents, and procedures designed to minimize the quantities of VOC-bearing cleaning materials used;
 - (iii) Where practical, using enclosed spray-applicator cleaning methods, VOC-recycling systems and other spray-applicator cleaning methods designed to reduce or eliminate VOC emissions; and
 - (iv) Where practical, using detergents, high-pressure water, or other non-VOC cleaning options to clean coating lines, containers, and process equipment.
- (d) With regard to storage and transfer of VOC, the Permittee shall, at a minimum:
 - (i) Install conservation vents, or other vapor control measures designed to minimize standing losses, on all storage tanks with a capacity of 2000 gallons or more in VOC service; and
 - (ii) For stationary storage tanks with capacities greater than 10,000 gallons and less than 40,000 gallons that store VOC or VOC-bearing materials, excluding gasoline, with vapor pressures greater than 1.5 psia, use vapor balance, vapor control lines, or other vapor control measures, whenever VOC are transferred from tank trucks into such tanks.
- (5) In accordance with COMAR 26.11.19.16, the Permittee shall visually inspect all equipment and components in VOC service for leaks at least once per calendar month. If leaks are detected, the Permittee shall:
 - (a) Tag any leak immediately so that the tag is clearly visible. The tag shall be made of a material that will withstand any weather or corrosive conditions to which it may be normally exposed. The tag shall bear an identification number, the date that the leak was discovered, and the identity of the person who discovered the leak. The tag shall remain in place until the leak has been repaired.
 - (b) Initiate immediate action to repair all observed VOC leaks that can be repaired within 48 hours.
 - (c) Repair all other leaking components within fifteen (15) days of discovery. If a replacement part is needed, the part shall be ordered within three (3) days of discovery of the leak, and the leak shall be repaired within 48 hours of receipt of the part.

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

- (d) Maintain a supply of components and component parts, such as seals, gaskets, packing and pipe fittings, that are known to wear or corrode, or that otherwise need to be routinely replaced.
- (6) In accordance with COMAR 26.11.19.16D, leaking components that cannot be repaired as required because they are inaccessible, or that cannot be repaired during operation of an installation, shall be identified in a log and included in the facility's maintenance schedule for repair during the next outage of the installation.
- (7) For the Permittee's Fuel Burning Equipment (2 Boilers and 3 Hot Oil Heaters as registered under ARMA registration numbers 4-0074, 4-0075, 6-0010, 6-0011, and 6-0012), the following shall apply:
 - (a) For each fuel burning unit the Permittee is authorized to burn any of the following fuels provided that the fuel burning unit is equipped with a burner suitable for the selected fuel:
 - (i) Residual fuel oil with a sulfur content that does not exceed 2 percent by weight;
 - (ii) Distillate fuel oil with a sulfur content that does not exceed 0.3 percent by weight;
 - (iii) Waste combustible fluids as defined at COMAR 26.11.09.01.B(10); and
 - (iv) On-specification used oil as defined at COMAR 26.11.09.01.B(4-2).
 - (b) In accordance with COMAR 26.11.09.10B(1), used oil shall be considered on-specification if the used oil has a minimum flash point of 100°F and does not contain materials that exceed any of the following allowable levels:

Material	Allowable Level (ppm by weight)
Lead	100
Total Halogens	4,000 *
Arsenic	5
Cadmium	2
Chromium	10

* In accordance with COMAR 26.11.09.10B(2), for used oil that does not satisfy the rebuttable presumption for halogens at 40 CFR 279.10(b)(1)(ii) and 279.63, the maximum allowable level for halogens is 1000 ppm.

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

- (c) In accordance with COMAR 26.11.09.10C the Permittee shall not burn used oil that contains 50 or more ppm by weight polychlorinated biphenyls (PCBs).
- (8) For the Permittee's Ester (Plasticizer) Manufacturing Plant (ARMA registration no. 7-0018) the following shall apply:
- (a) The Permittee shall vent all process exhaust gases from reactors K-121, K-127, and K-132 through a regenerative thermal oxidizer (RTO) or a water scrubber prior to discharge to atmosphere. The water scrubber shall be used only when the RTO is inoperable or out of service for maintenance, and shall be used not more than 10 percent of the annual operating time of the ester (plasticizer) manufacturing plant; and
- (b) Unless the Permittee obtains from the Department written authorization otherwise, whenever process exhaust gases from the ester (plasticizer) manufacturing plant are vented to the RTO, the Permittee shall maintain the temperature of the combustion zone of the RTO at a minimum of 1400 °F.
- (9) For the Permittee's tank farm (ARMA registration no. 9-0013) and wastewater treatment plant (ARMA registration no. 9-0010): Before discharge to atmosphere VOC emissions from each of the storage tanks and wastewater treatment units listed in the following table shall be exhausted through a carbon adsorption system that includes at least two (2) carbon canisters arranged in series. More than one (1) tank or wastewater treatment unit may be exhausted through a single carbon adsorption system.

Permittee Tank Designation	Description	Nominal Capacity (gallons)
T-301	API Oil/Water Separator	5,000
T-302	API Oil/Water Separator	5,000
T-303	Wastewater Influent Sump	1,000
T-304	Wastewater Influent Sump	1,000
T-305	Organic Skim Tank	5,000
T-306	Organic Tank	5,000
T-324	Organic Material (VOC) Storage	12,000
T-325	Organic Material -Toluene Byproduct (VOC) Storage	12,000
T-339	Organic Material (VOC) Storage	16,300
T-340	Primary WWT Sludge Storage	10,000
T-342	Primary WWT Clarifier Overflow Tank	1,000
T-343	Primary WWT Surge Tank	20,500

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

- (10) For each carbon adsorption system required by this permit, the following shall apply:
- (a) At least once per calendar month the Permittee shall measure the concentration of VOC in the gas streams at the inlet and outlet of the first (upstream) carbon canister in the series of canisters. The Permittee shall make all required measurements with a VOC detector that is calibrated and operated in accordance with vendor specifications and recommendations;
 - (b) Either prior to "breakthrough" or when "breakthrough" is first detected, the Permittee shall replace the first carbon canister with the second carbon canister in the series, and shall install a "new" second carbon canister that contains new or regenerated carbon. "Breakthrough" shall be defined as the circumstance when the concentration of VOC in the gas stream at the outlet of the canister becomes greater than 15 percent of the concentration at the inlet; and
 - (c) The Permittee shall maintain on site at least one (1) replacement carbon canister (containing either new or regenerated carbon) at all times for each carbon adsorption system required by this permit.
- (11) Other than tanks listed in Part E of this permit, the Permittee shall not have on site any storage tank for which a permit-to-construct is required.

Part D – Monitoring, Record Keeping and Reporting

- (1) Whenever the RTO is used to control emissions from the ester manufacturing plant the Permittee shall continuously monitor and record the temperature of the combustion zone of the RTO.
- (2) The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, records of the following information:
- (a) Facility-wide emissions of NO_x, SO_x, the individual HAP with greatest emissions, and the combined total of all HAPs, (actual tons per calendar month and actual tons for each period of 12 consecutive months);
 - (b) Fuel oil supplier certificates of analysis that provide the sulfur content of all residual and distillate fuel oils delivered to the plant;
 - (c) Used oil supplier certificates of analysis that provide the flash point of any used oil accepted at the site, and that provide the concentrations in the used oil (in ppm by weight) of PCB, total halogens, lead, arsenic, cadmium, and chromium;

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

- (d) All required recordation of the temperature of the combustion zone of the RTO;
 - (e) Information concerning measurements required by this permit of VOC concentrations at the inlet and outlet of carbon canisters. Such information shall include identification of the canister tested, the dates on which the testing was conducted, the value in ppmv of each VOC concentration determined, the dates on which carbon canisters were replaced, and the location of each replacement canister;
 - (f) All written descriptions of "good operating practices" designed to minimize emissions of VOC; and
 - (g) VOC leak detection and repair logs that include identification of the persons who conducted the leak detection inspections, the dates on which the inspections were conducted, the findings during the inspections, a listing by tag identification number and a description of all leaks discovered, and the date and nature of all leak repairs effected.
- (3) In accordance with 40 CFR 60, Subpart Kb, §116b(b) and (c), for any volatile organic liquid (VOL) storage vessel with a design capacity greater than or equal to 75 m³ (19,815 gal) but less than 151 m³ (39,894.2 gal) storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa (2.176 psi) the Permittee shall maintain readily accessible records showing the dimensions of the storage vessel, an analysis showing the capacity of the storage vessel, a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.
- (4) The Permittee shall maintain at the facility for at least five (5) years records necessary to support annual certifications of emissions and demonstrations of compliance for toxic air pollutants. Such records shall include, if applicable, the following:
- (a) mass emissions rates for each regulated pollutant, and the total mass emissions rate for all regulated pollutants for each registered source of emissions;
 - (b) accounts of the methods and assumptions used to quantify emissions;
 - (c) all operating data, including operating schedules and production data, that were used in determinations of emissions;
 - (d) amounts, types, and analyses of all fuels used;

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

- (e) any records, the maintenance of which is required by this permit or by State or federal regulations, that pertain to the operation and maintenance of continuous emissions monitors, including:
 - (i) all emissions data generated by such monitors;
 - (ii) all monitor calibration data;
 - (iii) information regarding the percentage of time each monitor was available for proper service; and
 - (iv) information concerning any equipment malfunctions;
 - (f) Information concerning operation, maintenance, and performance of air pollution control equipment and compliance monitoring equipment, including:
 - (i) identifications and descriptions of all such equipment;
 - (ii) operating schedules for each item of such equipment;
 - (iii) accounts of any significant maintenance performed;
 - (iv) accounts of all malfunctions and outages; and
 - (v) accounts of any episodes of reduced efficiency;
 - (g) limitations on source operation or any work practice standards that significantly affect emissions; and
 - (h) other relevant information as required by the Department.
- (5) The Permittee shall submit to the Department by April 1 of each year during the term of this permit a certification of emissions for the previous calendar year. Such certifications shall be prepared in accordance with requirements, as applicable, adopted under COMAR 26.11.01.05 – 1 and COMAR 26.11.02.19D.
- (a) Certifications of emissions shall be submitted on forms obtained from the Department.
 - (b) A certification of emissions shall include mass emissions rates for each regulated pollutant, and the total mass emissions rate for all regulated pollutants for each of the Permittee's registered sources of emissions.

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

- (c) The person responsible for a certification of emissions shall certify the submittal to the Department in the following manner:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- (6) The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. Such analysis shall include either:
- (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
 - (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.
- (7) The Permittee shall report, in accordance with requirements under COMAR 26.11.01.07, occurrences of excess emissions to the Compliance Program of the Air and Radiation Management Administration.

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

Part E – Identification of Bulk Storage Tanks, and
Identification of Tanks, Surface Impoundments (Ponds) and
Processing Units Associated with Wastewater Treatment

Table E-1: Bulk Storage Tanks
(Does not include tanks associated with wastewater treatment or fire protection)

Tank No.	Capacity	Installation Date	Storage Service	Control Device	Notes
T-1	12,000	1960	Low Vapor Pressure (LVP) Organics		
T-3	5,000	1962	LVP Organics		
T-4	5,000	1962	LVP Organics		
T-5	5,000	1962	LVP Organics		
T-6	5,000	1962	LVP Organics		
T-7	10,200	1960	LVP Organics		
T-8	11,600	1960	LVP Organics		
T-9	1,600	1960	LVP Organics		
T-10	4,800		LVP Organics		
T-12	11,600	1962	LVP Organics		
T-13	14,700	1960	LVP Organics		
T-14	5,000	1962	LVP Organics		
T-15	5,000	1962	LVP Organics		
T-16	5,000	1962	LVP Organics		
T-17	15,000	1962	LVP Organics		
T-18	2,500	1962	LVP Organics		
T-19	2,500	1962	LVP Organics		
T-20	27,500	1967	LVP Organics		
T-21	27,500	1967	LVP Organics		
T-22	27,500	1967	LVP Organics		
T-23	53,000	1962	LVP Organics		
T-24	53,000	1962	LVP Organics		
T-25	30,000	1967	Organic Material (VOC)		
T-25B	30,000	2007	Organic Material (VOC)		
T-26	200,000	1969	LVP Organics		
T-27	200,000	1969	LVP Organics		
T-28	200,000	1969	LVP Organics		
T-29	200,000	1969	LVP Organics		
T-30	30,000	1962	LVP Organics		
T-32	12,000	1962	Organic Material (VOC)		
T-33	7,600	1962	LVP Organics		
T-34	30,000	1962	LVP Organics		
T-35	5,100	1962	LVP Organics		

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

Tank No.	Capacity	Installation Date	Storage Service	Control Device	Notes
T-36	11,000	1967	LVP Organics		
T-37	42,075	1981	LVP Organics		
T-39	12,000	1972	LVP Organics		
T-40	12,000	1972	LVP Organics		
T-41	12,000	1967	LVP Organics		
T-42	30,000	1988	LVP Organics		
T-43	30,000	1988	LVP Organics		
T-44	30,000	1988	LVP Organics		
T-45	30,000	1988	LVP Organics		
T-46	30,000	1988	LVP Organics		
T-47	30,000	1988	LVP Organics		
T-48	30,000	1988	LVP Organics		
T-49	30,000	1988	LVP Organics		
T-50	30,000	1988	LVP Organics		
T-51	30,000	1988	LVP Organics		
T-52	30,000	1988	LVP Organics		
T-54	15,000	1996	LVP Organics		
T-55	15,000	1996	LVP Organics		
T-56	16,000	1967	LVP Organics		
T-57	3,000	1960	LVP Organics		
T-58	3,000	1960	LVP Organics		
T-59	3,000	1960	LVP Organics		
T-60	3,000	1960	LVP Organics		
T-61	5,000	1960	Organic Material (VOC)		
T-62	12,000	1967	LVP Organics		
T-63	12,000	1967	LVP Organics		
T-64	21,400	1985	LVP Organics		
T-70	10,000	1967	LVP Organics		
T-71	10,000	1967	LVP Organics		
T-72	10,000	1967	LVP Organics		
T-73	10,000	1967	LVP Organics		
T-74	25,000	1967	LVP Organics		
T-75	25,000	1967	LVP Organics		
T-76	5,000	1967	LVP Organics		
T-77	5,000	1967	LVP Organics		
T-78	20,000	1967	Organic Material (VOC)		
T-79	20,000	1967	LVP Organics		
T-80	12,000	1969	LVP Organics		
T-81	12,000	1969	LVP Organics		
T-82	12,000	1969	LVP Organics		
T-83	12,000	1969	LVP Organics		

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

Tank No.	Capacity	Installation Date	Storage Service	Control Device	Notes
T-85	12,000	1969	LVP Organics		
T-86	12,000	1969	LVP Organics		
T-87	10,000	1969	LVP Organics		
T-88	10,000	1969	LVP Organics		
T-89	29,500	1987	LVP Organics		
T-90	29,500	1987	LVP Organics		
T-91	29,500	1987	LVP Organics		
T-92	29,500	1990	LVP Organics		
T-93	20,000	1969	LVP Organics		
T-94	20,000	1969	LVP Organics		
T-201	67,000	1967	LVP Organics		
T-202	67,000	1967	LVP Organics		
T-203	67,000	1967	LVP Organics		
T-204	67,000	1967	LVP Organics		
T-205	67,000	1967	LVP Organics		
T-206	67,000	1967	LVP Organics		
T-207	67,000	1967	LVP Organics		
T-208	67,000	1967	LVP Organics		
T-209	6,300	1967	LVP Organics		
T-211	150,000	1969	LVP Organics		
T-212	150,000	1969	LVP Organics		
T-213	150,000	1969	LVP Organics		
T-214	100,000	1972	LVP Organics		
T-215	100,000	1972	LVP Organics		
T-322	10,200	1960	Organic Material (VOC)		
T-323	10,200	1960	Organic Material (VOC)		
T-324	12,000	1967	Organic Material (VOC)	Carbon Canisters	Required to be equipped with carbon canisters
T-325	12,000	1967	Organic Material (VOC)	Carbon Canisters	Required to be equipped with carbon canisters
T-326	40,000		Fuel Oil or Used Oil Storage		
T-327	500	1967	Potable H ₂ O Head Tank		Well water
T-328	20,000	1967	Potable H ₂ O Surge Tank		Potable water (T-327 well water) that goes through sand and polishing filters)
T-331	15,000		Cooling Tower Water (CTW) Heat Sink		
T-332	15,000		CTW Heat Sink		
T-334	250	1969	Diesel Fuel For Fire Pump		
T-335	275	1972	Diesel Fuel For Emergency Generators		

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

Tank No.	Capacity	Installation Date	Storage Service	Control Device	Notes
T-336	5,000	1969	Cooling Tower and Boiler Blow Down Tank		
T-338	500	1982	Diesel Fuel for Plant Vehicles		
T-339	16,300	1985	Organic Material (VOC)	Carbon Canisters	Required to be equipped with carbon canisters
T-601	30,000	1990	Organic Material (VOC)	Carbon Canisters	Carbon canisters optional
T-602	20,000	1990	Organic Material (VOC)	Carbon Canisters	Carbon canisters optional
T-603	20,000	1990	LVP Organics		
T-604	12,000	1990	Organic Material (VOC)	Carbon Canisters	Carbon canisters optional
T-605	30,000	1990	LVP Organics		
T-606	25,000	1990	LVP Organics		
T-607	25,000	1990	LVP Organics		
T-608	40,000	1990	LVP Organics		
T-609	40,000	1990	LVP Organics		
T-611	40,000	1990	LVP Organics		

Table E-2: Tanks and Surface Impoundments (Ponds) Associated With Wastewater Treatment and Fire Protection⁽¹⁾

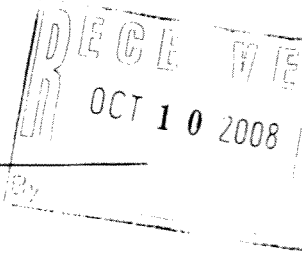
Tank or Pond No.	Type ⁽²⁾	Capacity	Storage Service	Control Device	Notes
301	V, R	5,000	API oil/water separator	Carbon Canisters	Required to be equipped with carbon canisters
302	V, R	5,000	API oil/water separator	Carbon Canisters	Required to be equipped with carbon canisters
303	V	1,000	influent sump	Carbon Canisters	Required to be equipped with carbon canisters
304	V	1,000	influent sump	Carbon Canisters	Required to be equipped with carbon canisters
305	H Tank	5,000	organic skimming	Carbon Canisters	Required to be equipped with carbon canisters
306	V Tank	5,000	organic skimming	Carbon Canisters	Required to be equipped with carbon canisters
307	Pond	300,000	Fire Protection		
311	Sump	3,500	Outfall Sump		
312	Pond	10 Acres	Effluent Pond E – Rt 297		
316	Pond	221,713	Diluted Water Pond		

GENOVIQUE SPECIALTIES CORPORATION
PERMIT-TO-OPERATE
PERMIT No. 029-0001

Tank or Pond No.	Type⁽²⁾	Capacity	Storage Service	Control Device	Notes
318	V tank	200,000	WWT Surge Tank		
340	V, CB Tank	10,000	1° WWT Sludge Storage	Carbon Canisters	Required to be equipped with carbon canisters
341	V, OT Tank	55,000	1° WWT Clarifier		
342	V Tank	1,000	1° WWT Clarifier Overflow Tank	Carbon Canisters	Required to be equipped with carbon canisters
343	V Tank	20,500	1° WWT Surge Tank	Carbon Canisters	Required to be equipped with carbon canisters
350	V Tank	1,400	Venturi Scrubber Tank		
358	V, OT Tank	328,000	Conc. WW Equalization		
360	V, OT Tank	496,418	2° WWT Bio Reactor		
361	V, OT, CB Tank	51,400	2° WWT Clarifier		
362	V, CB Tank	32,900	2° WWT Thickener		
363	V, CB Tank	5,000	2° WWT Recycle Tank		
364	V Tank	50	Phosphate Nutrient Tank		

⁽¹⁾ Surface impoundments (ponds) 313 and 315 (176,796 gallons and 146,392 gallons, respectively) were formerly used as effluent surge ponds in the facility's wastewater treatment plant, and as such were formerly listed in Table E-2 above, but in accordance with a Consent Decree executed with MDE's Water Management Administration the Permittee removed the two ponds from such service (as of April 4, 2008), and currently these ponds inventory only rain water; therefore these two ponds are no longer listed in Table E-2 of this permit.

⁽²⁾ Abbreviations: V = vertical tank, H = horizontal tank, R = rectangular, CB = cone bottom, OT = open top, 1° = primary, 2° = secondary



APPLICATION FOR STATE PERMIT TO OPERATE
FOR CHANGE OF OWNERSHIP
AIR AND RADIATION MANAGEMENT ADMINISTRATION

Owner Information:

Name of Owner or Operator: Genovique Specialties Corporation		
Street Address: 10380 WORTON ROAD		
City: Chestertown	State: MD	Zip Code: 21620
Telephone Number 410-778-1991		Fax Number 410-778-5538

Facility Information:

Name of Facility: Genovique Specialties Corporation		Premises (Permit) Number: 029-00001
Street Address: 10380 WORTON ROAD		
City: Chestertown	State: MD	Zip Code: 21620
Plant Manager: Joe Morrison	Telephone Number: 410-778-1991 x230	Fax Number: 410-778-5538
24-Hour Emergency Telephone Number for Air Pollution Matters: 410-778-1991		
Contact for Permit Issues: JOANNE SZYMANSKI	Title: EHS Manager	
Telephone Number: 410-778-1991 x252	E-Mail Address: jszymanski@genovique.com	



MARYLAND DEPARTMENT OF THE ENVIRONMENT

2. Complete the following information:

Date when purchased company: 5/31/2005 10/1/2008

Previous owner's name: Velsicol Chemical Corporation

Primary business activity at purchased location: ESTER Manufacturing

NAICS or SIC (if known) 325199

Facility Contact (Include name, position & telephone number): Joanne Szymanski
EHS Manager 410-778-1991 x252

3. Equipment Inventory

Attached and incorporated by reference as part of this application, is a current list of registered equipment at this facility. Please review and confirm the operational status of indicated equipment. If a piece of equipment is not on site, please note date of removal if known.

4. Certification by Responsible Official:

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision and in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

RESPONSIBLE OFFICIAL:

X

SIGNATURE

Joe Morrison

DATE

10/6/08

PRINTED NAME

Joe Morrison

TITLE

Plant Manager



**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

Martin O'Malley
Governor

Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

DEC - 2 2008

Robert M. Summers, Ph.D.
Deputy Secretary

Ms. Joanne K. Szymanski, EHS Coordinator
Genovique Specialties Corporation
10380 Worton Road
Chestertown MD 21620

Dear Ms. Szymanski:

Enclosed is a reissue of the State permit-to-operate for your ester (plasticizer) manufacturing facility located in Kent County near Chestertown, Maryland. The permit, which has a five year term that will expire December 31, 2013, is issued under the name of new owner Genovique Specialties Corporation (Genovique). So that the facility may be recognized as a synthetic minor source with respect to Title V of the Clean Air Act the permit includes limitations on facility-wide emissions of nitrogen oxides (NO_x), sulfur oxides (SO_x) and hazardous air pollutants (HAP). Genovique will be recognized as a synthetic minor source as long as the facility complies with the permit conditions or until such time status as a synthetic minor source is not required.

If operations at your facility change such that emissions of any regulated air pollutant exceed that pollutant's applicable major source threshold for Title V, Genovique is required to submit to the Department a completed Title V permit application no later than 12 months after the date when annual emissions of the pollutant exceed the threshold.

Please be reminded that an emissions based fee must be paid annually to maintain this permit and is due by the anniversary date of the permit. The Department will bill you prior to the anniversary date for the annual fee.

If you have any questions regarding the issuance of this permit, please contact Mr. Ross Oliver of my staff at (410) 537-3931.

Sincerely,

Karen G. Irons, P.E., Administrator
Air Quality Permits Program
Air and Radiation Management Administration

KGI/aw

Enclosure

cc: Laramie Daniel with copy of permit
Kent County Health Department
Jay Bozman with copy of permit

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

Martin O'Malley
Governor

Anthony G. Brown
Lieutenant Governor

Shari T. Wilson
Secretary

Robert M. Summers, Ph.D.
Deputy Secretary

DEC 16 2008

Ms. Joanne K. Szymanski, EHS Coordinator
Genovique Specialties Corporation
10380 Worton Road
Chestertown MD 21620

Dear Ms. Szymanski:

As we discussed by telephone on December 15, 2008, I have enclosed a new title page for the State permit-to-operate that was recently issued for your ester (plasticizer) manufacturing facility. The title page included with the permit that was mailed to you earlier shows the wrong expiration date. The enclosed title page shows the correct expiration date. Please remove and discard the incorrect title page and attach the enclosed title page to the remainder of the permit (pages 2 through 19). No other change to the permit is necessary. I apologize for the confusion and for any inconvenience. If you have any questions, please contact me at 410 - 537 - 3931.

Sincerely,

Ross A. Oliver
Air Quality Permits Program
Air and Radiation Management Administration

RAO/aw

Enclosure

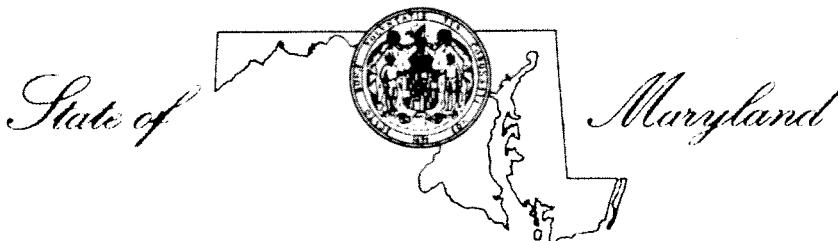
cc: Laramie Daniel with copy of enclosure
Kent County Health Department
Jay Bozman with copy of enclosure



0

KEEP PERMIT AT SITE

CONTROL NO. B- 02011



Martin O' Malley
Governor

Shari T. Wilson
Secretary

DEPARTMENT OF THE ENVIRONMENT

Air and Radiation Management Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

☐ Construction Permit

☒ Operating Permit

PERMIT NO. 029-0001

DATE ISSUED January 1, 2009

PERMIT FEE To Be Paid in Accordance
with COMAR 26.11.02.19B

EXPIRATION DATE December 31, 2014

LEGAL OWNER & ADDRESS

Genovique Specialties Corporation
10380 Worton Road
Chestertown MD 21620
Attn: Ms. Joanne Syzmanski, EHS Manager

SITE

Genovique Specialties Corporation
10380 Worton Road
Chestertown MD 21620
KENT County
AI# - 2107

SOURCE DESCRIPTION

One (1) ester (plasticizer) manufacturing facility.

Wrong
expiration
date

This source is subject to the conditions described on the attached pages.

Page 1 of 19

Signature
Program Manager

Signature
Director, Air and Radiation Management Administration

STATE PERMIT-TO-OPERATE

P/O PACKAGE SIGN-OFF SHEET

COMPANY NAME: Genovique Specialties Corporation (formerly Velsicol Chemical Corporation)

PERMIT NO.: 029 – 0001 (AI No. 2107)

INITIAL & DATE

P/O Package Complete & Draft Permit Prepared:

Ross Oliver *RAO* 10/21/2008

P/O Package & Draft Permit Approved by Section Head:

Suna Sariscak *MS* 10/21/08

Draft Permit Approved by Compliance Program:

JAL 10/23/08
FR 10/23/08

Draft Permit Approved by AQP Division Chief:

Justin Hsu *JHS* 10/24/08

Draft Permit Conditions Shared With Facility:

_____ To Program Administrator for Signature
_____ To Administration Director for Signature

Return to P/O Coordinator



Check Off Sheets Attached:

- ✓ Control Sheet or Memo
- ✓ Draft AMA-1
- ✓ Draft Permit Conditions
- ✓ P/O Application
- ✓ Cover Letter

Control Sheet For

STATE PERMIT-TO-OPERATE

Permit no.: 029 – 0001

Company name: Genovique Specialties Corporation (formerly Velsicol Chemical Corporation)

Permit type: Reissue of State PTO under new ownership

Installation description: Ester (Plasticizer) Manufacturing Facility

Inspection date: January 11, 2006

Inspector: Greg Franzoni

Has company complied with all permit-to-construct conditions? Yes

Inspection results: No violations noted

Number of complaints received to date: None

Describe complaint(s): N/A

Stack testing required? No

Dates of previous stack tests: N/A

Stack test results and description: N/A

Are permit-to-construct conditions revised in this permit? No

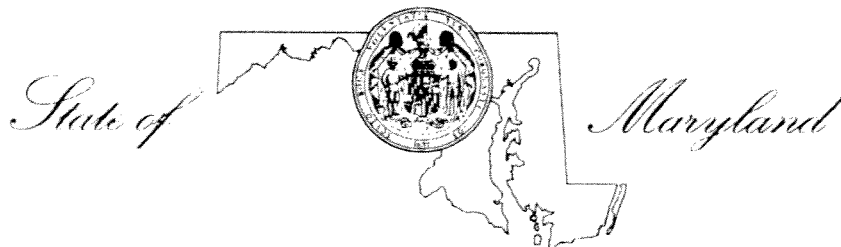
Describe revisions: N/A

Changes to previous PTO: The PTO renewal includes the following revisions:

- The PTO is issued under the name of new ownership Genovique Specialties Corporation.
- COMAR 26.11.06.03B(1) has been added to the list of applicable regulations. This regulation is cited in PTC 029 – 7 – 0018M, which was issued to Velsicol on August 9, 2007 to authorize installation of one Benzoflex® ester flaking and packaging unit in the facility's ester manufacturing plant.
- In accordance with the letter of May 12, 2008 from the facility's EHS Coordinator the listings of tanks and surface impoundments (ponds) included in Tables E-1 and E-2 have been revised such that Table E-1 now includes additional tank T-25B (a second 30,000-gallons molten benzoic acid storage tank for which no PTC was required), and Table E-2 includes a footnote to establish that (effective April 4, 2008) ponds 313 and 315 are no longer associated with the facility's wastewater treatment system. Removal of these ponds from wastewater treatment service was required by a Consent Decree the company executed with the Water Management Administration.

KEEP PERMIT AT SITE

CONTROL NO. B- 01158



Robert L. Ehrlich, Jr.
Governor

Kendal P. Philbrick
Secretary

DEPARTMENT OF THE ENVIRONMENT

Air and Radiation Management Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

☐ Construction Permit

☒ Operating Permit

PERMIT NO. 029-00001

DATE ISSUED January 1, 2007

PERMIT FEE To Be Paid in Accordance
with COMAR 26.11.02.19B

EXPIRATION DATE December 31, 2011

LEGAL OWNER & ADDRESS

Velsicol Chemical Corporation
10380 Worton Road
Chestertown MD 21620
Attn: Ms. Joanne Syzmanski, EHS Manager

SITE

Velsicol Chemical Corporation
10380 Worton Road
Chestertown MD 21620

KENT County

AI 2107

SOURCE DESCRIPTION

One (1) ester (plasticizer) manufacturing facility.

This source is subject to the conditions described on the attached pages.

Page 1 of 19

Kenneth G. Smith
Program Manager

Angela Branner
Director, Air and Radiation Management Administration

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

INDEX

- Part A – General Provisions
- Part B – Applicable Regulations
- Part C – Operational and Testing Requirements
- Part D – Monitoring, Record Keeping and Reporting
- Part E – Listing of Tanks, Ponds and Equipment Associated with Wastewater Treatment, Bulk Storage, and Fire Protection

This permit-to-operate incorporates requirements for the following registered installations:

Registration No.	Description	Date of Installation
4-0074	One (1) Boiler (Permittee designation 250 C.B. boiler), rated at 10.5 MMBtu/hr heat input, fired with residual and distillate fuel oils, waste combustible fluids (WCF), and used oils.	01/1960
4-0075	One (1) Boiler (Permittee designation 700 C.B. boiler), rated at 29.3 MMBtu/hr heat input, fired with residual and distillate fuel oils, and used oils.	01/1968
6-0010	One (1) Hot Oil Heater (Permittee no. 2), rated at 15 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF, and used oils.	01/1974
6-0011	One (1) Hot Oil Heater (Permittee no. 3), rated at 14 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF, and used oils.	01/1968
6-0012	One (1) Hot Oil Heater (Permittee no. 1), rated at 10 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF, and used oils.	01/1967
7-0018	Equipment associated with one (1) esterification process as registered with the Department, including three (3) process reactors (Permittee designations K-121, K-127, and K-132) controlled by a regenerative thermal oxidizer (RTO) with a water scrubber for back-up control when the RTO cannot be operated.	01/1960
9-0010	One (1) wastewater treatment plant including an oil/water separator, clarifiers, an equalization tank, a bioreactor, a sludge de-watering unit, and other equipment as listed in Table E-2 under Part E of this permit.	01/1960
9-0013	One (1) tank farm comprising bulk storage tanks as listed in Table E-1 under Part E of this permit.	01/1960

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

Part A – General Provisions

- (1) The application (form AMA-26) received at the Department on October 17, 2006 for the renewal of the Permittee's permit-to-operate is incorporated into this permit by reference. If there are any conflicts between representations in the application and representations in this permit, the representations in the permit shall govern. Estimates of dimensions, volumes, emissions rates, operating rates, feed rates and hours of operation included in the application for renewal do not constitute enforceable numeric limits beyond the extent necessary for compliance with applicable requirements.
- (2) Upon presentation of credentials, representatives of the Maryland Department of the Environment ("MDE" or the "Department:") and the Kent County Health Department shall at any reasonable time be granted, without delay and without prior notification, access to the Permittee's property and permitted to:
 - (a) determine compliance with the requirements of this permit and any applicable regulations;
 - (b) sample, as necessary to determine compliance with requirements of this permit and applicable regulations, any materials stored or processed on site, any waste materials, and any discharge into the environment;
 - (c) inspect any monitoring equipment required by applicable regulations or by any permit issued by the Department's Air and Radiation Management Administration;
 - (d) review and copy any records, including all documents required to be maintained by this permit and by applicable regulations, relevant to the Department's determination of compliance with an air pollution control requirement; and
 - (e) obtain any photographic documentation or evidence necessary to determine compliance with the requirements of this permit and applicable regulations.
- (3) If any provision of this permit is declared by proper authority to be invalid, the remaining provisions of the permit shall remain in effect.
- (4) Nothing in this permit authorizes the violation of any rule or regulation or the creation of a nuisance or air pollution.

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

Part B – Applicable Regulations

- (1) This source is subject to all applicable federal air pollution control requirements including, but not limited to, all applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source Performance Standards (NSPS) promulgated under 40 CFR 60, Subparts A and Kb for volatile organic liquid storage vessels.

All reports and notifications required under 40 CFR 60, Subpart(s) A and Kb shall be submitted to the Compliance Program of the Department's Air and Radiation Management Administration.

- (2) This source is subject to all applicable federally enforceable State air pollution control requirements including, but not limited to, the following regulations:
- (a) COMAR 26.11.01.07C, which requires that the Permittee report to the Department occurrences of excess emissions.
 - (b) COMAR 26.11.02.09A, which requires that the Permittee obtain a permit-to-construct if an installation is to be modified in manner that causes a change in the quantity, nature, or characteristics of emissions referenced in the permit-to-construct issued for that installation.
 - (c) COMAR 26.11.06.02C(1), which limits visible emissions other than uncombined water to not more than 20% opacity.
 - (d) COMAR 26.11.09.05A(1), which limits visible emissions, other than uncombined water, from fuel burning equipment to not more than 20% opacity.
 - (e) COMAR 26.11.09.06A(1), which prohibits the discharge to atmosphere of particulate matter from fuel burning equipment constructed before January 17, 1972 in excess of the amounts shown in Figure 1 under COMAR 26.11.09.09.
 - (f) COMAR 26.11.09.06A(2), which prohibits the discharge to atmosphere of particulate matter from fuel burning equipment constructed on or after January 17, 1972 in excess of the amounts shown in Figure 2 under COMAR 26.11.09.09.
 - (g) COMAR 26.11.09.07A(1)(b), which limits the sulfur content of residual fuel oil to not more than 2 percent by weight.

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

- (h) COMAR 26.11.09.07A(1)(c), which limits the sulfur content of distillate fuel oil to not more than 0.3 percent by weight.
- (i) COMAR 26.11.19.02I, which requires that the Permittee establish in writing and implement facility-wide "good operating practices" designed to minimize emissions of VOC.
- (j) COMAR 26.11.19.16, which requires that the Permittee implement a VOC leak detection and repair program designed to minimize unintended emissions of VOC from process equipment and components, e.g., in-process vessels, storage tanks, pumps, compressors, valves, flanges and other pipeline fittings, pressure relief valves, process drains, and open-ended pipes.
- (k) COMAR 26.11.19.30, which requires that the Permittee control emissions of volatile organic compounds (VOC) from organic and inorganic chemical production operations, and includes the following requirements for facilities that discharge total uncontrolled VOC emissions of 100 or more pounds per day:
 - (i) The Permittee shall duct each process vent and exhaust line from any installation with actual emissions of 20 pounds or more per day into a control device that has an overall VOC destruction or removal efficiency of at least 90 percent.
 - (ii) If the Permittee cannot achieve compliance because of an unavoidable outage or malfunction of the primary control device, the Permittee shall either:
 - a. discontinue operation until the primary control device is returned to proper service; or
 - b. use a back-up control device that is approved by the Department.
 - (iii) The back-up control device may not be used more than 10 percent of the annual operating time of the affected installation during any calendar year unless a longer period is approved by the Department.
- (3) This source is subject to all applicable State-only enforceable air pollution control requirements including, but not limited to, the following regulations:
 - (a) COMAR 26.11.02.13A(16), which requires that the Permittee maintain and renew as required a valid State permit-to-operate issued by the Department.

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

- (b) COMAR 26.11.02.14D, which requires that the Permittee submit to the Department not later than 60 days prior to expiration of this permit a completed application for renewal.
- (c) COMAR 26.11.02.19C & D, which require that the Permittee submit to the Department annual certifications of emissions, and that the Permittee maintain sufficient records to support the emissions information presented in the submittals.
- (d) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
- (e) COMAR 26.11.09.10, which establishes requirements concerning use of used oils and waste combustible fluids as fuel.
- (f) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.
- (g) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health.

Part C – Operational and Testing Requirements

- (1) The Permittee shall maintain and operate all installations and associated air pollution control equipment so as to assure full and continuous compliance with all applicable air pollution control regulations and permit conditions.
- (2) The Permittee shall properly maintain, calibrate, and operate all control panel instrumentation and all devices employed to monitor performance of the facility's air pollution control devices.
- (3) Unless the Permittee obtains from the Department written authorization otherwise, the Permittee shall limit air emissions in accordance with the following:
 - (a) Facility-wide emissions of nitrogen oxides (NO_x) shall be less than 100 tons in all periods of 12 consecutive months;
 - (b) Facility-wide emissions of sulfur oxides (SO_x) shall be less than 100 tons in all periods of 12 consecutive months; and

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

- (c) Facility-wide emissions of hazardous air pollutants (HAP) shall be less than 10 tons for each individual HAP, and shall be less than 25 tons for the combined total of all HAPs, in all periods of 12 consecutive months.
- (4) In accordance with COMAR 26.11.19.02I, the Permittee shall implement "good operating practices" designed to minimize emissions of VOC to the atmosphere.
 - (a) "Good operating practices" shall include, at a minimum:
 - (i) Provisions for training operators with regard to practices, procedures, and maintenance requirements that are consistent with equipment manufacturers' recommendations, and with requirements dictated by the Permittee's experiences with operation of equipment. The training shall include material concerning proper maintenance procedures for air pollution control equipment;
 - (ii) Maintenance of covers on containers and other vessels that are not in use and that contain VOC or VOC-bearing materials;
 - (iii) Scheduling operations as much as practical to minimize color changes and other material changes when applying VOC-bearing materials by spray application;
 - (iv) Where practical, using high-volume-low-pressure (HVLP) spray applicators or other high efficiency application methods for spray application of VOC-bearing materials; and
 - (v) Mixing and blending VOC-bearing materials as much as practical in closed containers, and implementing preventive measures designed to minimize emissions from products that contain VOC.
 - (b) "Good operating practices" shall be established in writing, shall be made available to the Department upon request, and shall be either included as part of an operator-training program or posted where clearly visible to operators.
 - (c) The Permittee shall take all reasonable precautions to prevent or minimize the discharge of VOC into the atmosphere when cleaning process equipment and coating application equipment, including containers, vessels, tanks, lines, spray application devices, and pumps. Reasonable precautions for equipment cleanup shall include, at a minimum:

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

- (i) Storing all waste materials, including VOC-contaminated cloth and paper, in closed containers;
 - (ii) For frequently cleaned equipment, preparing written standard operating procedures that include, wherever practical, provisions for using non-VOC or low-VOC cleaning agents, and procedures designed to minimize the quantities of VOC-bearing cleaning materials used;
 - (iii) Where practical, using enclosed spray-applicator cleaning methods, VOC-recycling systems and other spray-applicator cleaning methods designed to reduce or eliminate VOC emissions; and
 - (iv) Where practical, using detergents, high-pressure water, or other non-VOC cleaning options to clean coating lines, containers, and process equipment.
- (d) With regard to storage and transfer of VOC, the Permittee shall, at a minimum:
 - (i) Install conservation vents, or other vapor control measures designed to minimize standing losses, on all storage tanks with a capacity of 2000 gallons or more in VOC service; and
 - (ii) For stationary storage tanks with capacities greater than 10,000 gallons and less than 40,000 gallons that store VOC or VOC-bearing materials, excluding gasoline, with vapor pressures greater than 1.5 psia, use vapor balance, vapor control lines, or other vapor control measures, whenever VOC are transferred from tank trucks into such tanks.
- (5) In accordance with COMAR 26.11.19.16, the Permittee shall visually inspect all equipment and components in VOC service for leaks at least once per calendar month. If leaks are detected, the Permittee shall:
 - (a) Tag any leak immediately so that the tag is clearly visible. The tag shall be made of a material that will withstand any weather or corrosive conditions to which it may be normally exposed. The tag shall bear an identification number, the date that the leak was discovered, and the identity of the person who discovered the leak. The tag shall remain in place until the leak has been repaired.
 - (b) Initiate immediate action to repair all observed VOC leaks that can be repaired within 48 hours.

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

- (c) Repair all other leaking components within fifteen (15) days of discovery. If a replacement part is needed, the part shall be ordered within three (3) days of discovery of the leak, and the leak shall be repaired within 48 hours of receipt of the part.
- (d) Maintain a supply of components and component parts, such as seals, gaskets, packing and pipe fittings, that are known to wear or corrode, or that otherwise need to be routinely replaced.

Components that cannot be repaired as required because they are inaccessible, or that cannot be repaired during operation of an installation, shall be identified in a log and included in the facility's maintenance schedule for repair during the next outage of the installation.

- (6) For the Permittee's Fuel Burning Equipment (2 Boilers and 3 Hot Oil Heaters as registered under ARMA registration numbers 4-0074, 4-0075, 6-0010, 6-0011, and 6-0012), the following shall apply:
 - (a) For each fuel burning unit the Permittee is authorized to burn any of the following fuels provided that the fuel burning unit is equipped with a burner suitable for the selected fuel:
 - (i) Residual fuel oil with a sulfur content that does not exceed 2 percent by weight;
 - (ii) Distillate fuel oil with a sulfur content that does not exceed 0.3 percent by weight;
 - (iii) Waste combustible fluids as defined at COMAR 26.11.09.01.B(10); and
 - (iv) On-specification used oil as defined at COMAR 26.11.09.01.B(4-2).
 - (b) In accordance with COMAR 26.11.09.10B(1), used oil shall be considered on-specification if the used oil has a minimum flash point of 100°F and does not contain materials that exceed any of the following allowable levels:

Material	Allowable Level (ppm by weight)
Lead	100
Total Halogens	4,000 *
Arsenic	5
Cadmium	2

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

Chromium	10
----------	----

* In accordance with COMAR 26.11.09.10B(2), for used oil that does not satisfy the rebuttable presumption for halogens at 40 CFR 279.10(b)(1)(ii) and 279.63, the maximum allowable level for halogens is 1000 ppm.

- (c) In accordance with COMAR 26.11.09.10C the Permittee shall not burn used oil that contains 50 or more ppm by weight polychlorinated biphenyls (PCBs).
- (7) For the Permittee's Ester (Plasticizer) Manufacturing Plant (ARMA registration no. 7-0018) the following shall apply:
- (a) The Permittee shall vent all process exhaust gases from reactors K-121, K-127, and K-132 through a regenerative thermal oxidizer (RTO) or a water scrubber prior to discharge to atmosphere. The water scrubber shall be used only when the RTO is inoperable or out of service for maintenance, and shall be used not more than 10 percent of the annual operating time of the ester (plasticizer) manufacturing plant; and
- (b) Unless the Permittee obtains from the Department written authorization otherwise, whenever process exhaust gases from the ester (plasticizer) manufacturing plant are vented to the RTO, the Permittee shall maintain the temperature of the combustion zone of the RTO at a minimum of 1400 °F.
- (8) For the Permittee's tank farm (ARMA registration no. 9-0013) and wastewater treatment plant (ARMA registration no. 9-0010): Before discharge to atmosphere VOC emissions from each of the storage tanks and wastewater treatment units listed in the following table shall be exhausted through a carbon adsorption system that includes at least two (2) carbon canisters arranged in series. More than one (1) tank or wastewater treatment unit may be exhausted through a single carbon adsorption system.

Permittee Tank Designation	Description	Nominal Capacity (gallons)
T-301	API Oil/Water Separator	5,000
T-302	API Oil/Water Separator	5,000
T-303	Wastewater Influent Sump	1,000
T-304	Wastewater Influent Sump	1,000
T-305	Organic Skim Tank	5,000
T-306	Organic Tank	5,000
T-324	Organic Material (VOC) Storage	12,000

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

T-325	Organic Material -Toluene Byproduct (VOC) Storage	12,000
T-339	Organic Material (VOC) Storage	16,300
T-340	Primary WWT Sludge Storage	10,000
T-342	Primary WWT Clarifier Overflow Tank	1,000
T-343	Primary WWT Surge Tank	20,500

- (9) For each carbon adsorption system required by this permit, the following shall apply:
- (a) At least once per calendar month the Permittee shall measure the concentration of VOC in the gas streams at the inlet and outlet of the first (upstream) carbon canister in the series of canisters. The Permittee shall make all required measurements with a VOC detector that is calibrated and operated in accordance with vendor specifications and recommendations;
 - (b) Either prior to "breakthrough" or when "breakthrough" is first detected, the Permittee shall replace the first carbon canister with the second carbon canister in the series, and shall install a "new" second carbon canister that contains new or regenerated carbon. "Breakthrough" shall be defined as the circumstance when the concentration of VOC in the gas stream at the outlet of the canister becomes greater than 15 percent of the concentration at the inlet; and
 - (c) The Permittee shall maintain on site at least one (1) replacement carbon canister (containing either new or regenerated carbon) at all times for each carbon adsorption system required by this permit.
- (10) Other than tanks listed in Part E of this permit, the Permittee shall not have on site any storage tank for which a permit-to-construct is required.

Part D –Monitoring, Record Keeping and Reporting

- (1) Whenever the RTO is used to control emissions from the ester manufacturing plant the Permittee shall continuously monitor and record the temperature of the combustion zone of the RTO.
- (2) The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, records of the following information:
 - (a) Facility-wide emissions of NO_x, SO_x, the individual HAP with greatest emissions, and the combined total of all HAPs, (actual tons per calendar month and actual tons for each period of 12 consecutive months);

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

- (b) Fuel oil supplier certificates of analysis that provide the sulfur content of all residual and distillate fuel oils delivered to the plant;
 - (c) Used oil supplier certificates of analysis that provide the flash point of any used oil accepted at the site, and that provide the concentrations in the used oil (in ppm by weight) of PCB, total halogens, lead, arsenic, cadmium, and chromium;
 - (d) All required recordation of the temperature of the combustion zone of the RTO;
 - (e) Information concerning measurements required by this permit of VOC concentrations at the inlet and outlet of carbon canisters. Such information shall include identification of the canister tested, the dates on which the testing was conducted, the value in ppmv of each VOC concentration determined, the dates on which carbon canisters were replaced, and the location of each replacement canister.
 - (f) All written descriptions of "good operating practices" designed to minimize emissions of VOC;
 - (g) VOC leak detection and repair logs that include identification of the persons who conducted the leak detection inspections, the dates on which the inspections were conducted, the findings during the inspections, a listing by tag identification number and a description of all leaks discovered, and the date and nature of all leak repairs effected.
- (3) In accordance with 40 CFR 60, Subpart Kb, §116b(b) and (c), for any volatile organic liquid (VOL) storage vessel with a design capacity greater than or equal to 75 m³ (19,815 gal) but less than 151 m³ (39,894.2 gal) storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa (2.176 psi) the Permittee shall maintain readily accessible records showing the dimensions of the storage vessel, an analysis showing the capacity of the storage vessel, a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.
- (4) The Permittee shall maintain at the facility for at least five (5) years records necessary to support annual certifications of emissions and demonstrations of compliance for toxic air pollutants. Such records shall include:
- (a) mass emissions rates for each regulated pollutant, and the total mass emissions rate for all regulated pollutants for each registered source of emissions;

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

- (b) accounts of the methods and assumptions used to quantify emissions;
 - (c) all operating data, including operating schedules and production data, that were used in determinations of emissions;
 - (d) amounts, types, and analyses of all fuels used;
 - (e) any records, the maintenance of which is required by this permit or by State or federal regulations, that pertain to the operation and maintenance of continuous emissions monitors, including:
 - (i) all emissions data generated by such monitors;
 - (ii) all monitor calibration data;
 - (iii) information regarding the percentage of time each monitor was available for proper service; and
 - (iv) information concerning any equipment malfunctions.
 - (f) Information concerning operation, maintenance, and performance of air pollution control equipment and compliance monitoring equipment, including:
 - (i) identifications and descriptions of all such equipment;
 - (ii) operating schedules for each item of such equipment;
 - (iii) accounts of any significant maintenance performed;
 - (iv) accounts of all malfunctions and outages; and
 - (v) accounts of any episodes of reduced efficiency.
 - (g) limitations on source operation or any work practice standards that significantly affect emissions; and
 - (h) other relevant information as required by the Department.
- (5) The Permittee shall submit to the Department by April 1 of each year during the term of this permit a certification of emissions for the previous calendar year. The certifications shall be prepared in accordance with requirements, as applicable, adopted under COMAR 26.11.01.05 – 1 and COMAR 26.11.02.19D.

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

- (a) Certifications of emissions shall be submitted on forms obtained from the Department.
- (b) A certification of emissions shall include mass emissions rates for each regulated pollutant, and the total mass emissions rate for all regulated pollutants for each of the Permittee's registered sources of emissions.
- (c) The person responsible for a certification of emissions shall certify the submittal to the Department in the following manner:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- (6) The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:
 - (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
 - (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.
- (7) The Permittee shall report, in accordance with requirements under COMAR 26.11.01.07, occurrences of excess emissions to the Compliance Program of the Air and Radiation Management Administration.

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

**Part E – Identification of Bulk Storage Tanks, and
Identification of Tanks, Ponds and Processing Units
Associated with Wastewater Treatment**

**Table E-1: Bulk Storage Tanks
(Does not include tanks associated with wastewater treatment or fire protection)**

Tank No.	Capacity	Installation Date	Storage Service	Control Device	Notes
T-1	12,000	1960	Low Vapor Pressure (LVP) Organics		
T-3	5,000	1962	LVP Organics		
T-4	5,000	1962	LVP Organics		
T-5	5,000	1962	LVP Organics		
T-6	5,000	1962	LVP Organics		
T-7	10,200	1960	LVP Organics		
T-8	11,600	1960	LVP Organics		
T-9	1,600	1960	LVP Organics		
T-10	4,800		LVP Organics		
T-12	11,600	1962	LVP Organics		
T-13	14,700	1960	LVP Organics		
T-14	5,000	1962	LVP Organics		
T-15	5,000	1962	LVP Organics		
T-16	5,000	1962	LVP Organics		
T-17	15,000	1962	LVP Organics		
T-18	2,500	1962	LVP Organics		
T-19	2,500	1962	LVP Organics		
T-20	27,500	1967	LVP Organics		
T-21	27,500	1967	LVP Organics		
T-22	27,500	1967	LVP Organics		
T-23	53,000	1962	LVP Organics		
T-24	53,000	1962	LVP Organics		
T-25	30,000	1967	Organic Material (VOC)		
T-26	200,000	1969	LVP Organics		
T-27	200,000	1969	LVP Organics		
T-28	200,000	1969	LVP Organics		
T-29	200,000	1969	LVP Organics		
T-30	30,000	1962	LVP Organics		
T-32	12,000	1962	Organic Material (VOC)		
T-33	7,600	1962	LVP Organics		
T-34	30,000	1962	LVP Organics		

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

Tank No.	Capacity	Installation Date	Storage Service	Control Device	Notes
T-35	5,100	1962	LVP Organics		
T-36	11,000	1967	LVP Organics		
T-37	42,075	1981	LVP Organics		
T-39	12,000	1972	LVP Organics		
T-40	12,000	1972	LVP Organics		
T-41	12,000	1967	LVP Organics		
T-42	30,000	1988	LVP Organics		
T-43	30,000	1988	LVP Organics		
T-44	30,000	1988	LVP Organics		
T-45	30,000	1988	LVP Organics		
T-46	30,000	1988	LVP Organics		
T-47	30,000	1988	LVP Organics		
T-48	30,000	1988	LVP Organics		
T-49	30,000	1988	LVP Organics		
T-50	30,000	1988	LVP Organics		
T-51	30,000	1988	LVP Organics		
T-52	30,000	1988	LVP Organics		
T-54	15,000	1996	LVP Organics		
T-55	15,000	1996	LVP Organics		
T-56	16,000	1967	LVP Organics		
T-57	3,000	1960	LVP Organics		
T-58	3,000	1960	LVP Organics		
T-59	3,000	1960	LVP Organics		
T-60	3,000	1960	LVP Organics		
T-61	5,000	1960	Organic Material (VOC)		
T-62	12,000	1967	LVP Organics		
T-63	12,000	1967	LVP Organics		
T-64	21,400	1985	LVP Organics		
T-70	10,000	1967	LVP Organics		
T-71	10,000	1967	LVP Organics		
T-72	10,000	1967	LVP Organics		
T-73	10,000	1967	LVP Organics		
T-74	25,000	1967	LVP Organics		
T-75	25,000	1967	LVP Organics		
T-76	5,000	1967	LVP Organics		
T-77	5,000	1967	LVP Organics		
T-78	20,000	1967	Organic Material (VOC)		
T-79	20,000	1967	LVP Organics		
T-80	12,000	1969	LVP Organics		

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

Tank No.	Capacity	Installation Date	Storage Service	Control Device	Notes
T-81	12,000	1969	LVP Organics		
T-82	12,000	1969	LVP Organics		
T-83	12,000	1969	LVP Organics		
T-85	12,000	1969	LVP Organics		
T-86	12,000	1969	LVP Organics		
T-87	10,000	1969	LVP Organics		
T-88	10,000	1969	LVP Organics		
T-89	29,500	1987	LVP Organics		
T-90	29,500	1987	LVP Organics		
T-91	29,500	1987	LVP Organics		
T-92	29,500	1990	LVP Organics		
T-93	20,000	1969	LVP Organics		
T-94	20,000	1969	LVP Organics		
T-201	67,000	1967	LVP Organics		
T-202	67,000	1967	LVP Organics		
T-203	67,000	1967	LVP Organics		
T-204	67,000	1967	LVP Organics		
T-205	67,000	1967	LVP Organics		
T-206	67,000	1967	LVP Organics		
T-207	67,000	1967	LVP Organics		
T-208	67,000	1967	LVP Organics		
T-209	6,300	1967	LVP Organics		
T-211	150,000	1969	LVP Organics		
T-212	150,000	1969	LVP Organics		
T-213	150,000	1969	LVP Organics		
T-214	100,000	1972	LVP Organics		
T-215	100,000	1972	LVP Organics		
T-322	10,200	1960	Organic Material (VOC)		
T-323	10,200	1960	Organic Material (VOC)		
T-324	12,000	1967	Organic Material (VOC)	Carbon Canisters	Required to be equipped with carbon canisters
T-325	12,000	1967	Organic Material (VOC)	Carbon Canisters	Required to be equipped with carbon canisters
T-326	40,000		Fuel Oil or Used Oil Storage		
T-327	500	1967	Potable H ₂ O Head Tank		Well water
T-328	20,000	1967	Potable H ₂ O Surge Tank		Potable water (T-327 well water) that goes through sand and polishing filters)

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

Tank No.	Capacity	Installation Date	Storage Service	Control Device	Notes
T-331	15,000		Cooling Tower Water (CTW) Heat Sink		
T-332	15,000		CTW Heat Sink		
T-334	250	1969	Diesel Fuel For Fire Pump		
T-335	275	1972	Diesel Fuel For Emergency Generators		
T-336	5,000	1969	Cooling Tower and Boiler Blow Down Tank		
T-338	500	1982	Diesel Fuel for Plant Vehicles		
T-339	16,300	1985	Organic Material (VOC)	Carbon Canisters	Required to be equipped with carbon canisters
T-601	30,000	1990	Organic Material (VOC)	Carbon Canisters	Carbon canisters optional
T-602	20,000	1990	Organic Material (VOC)	Carbon Canisters	Carbon canisters optional
T-603	20,000	1990	LVP Organics		
T-604	12,000	1990	Organic Material (VOC)	Carbon Canisters	Carbon canisters optional
T-605	30,000	1990	LVP Organics		
T-606	25,000	1990	LVP Organics		
T-607	25,000	1990	LVP Organics		
T-608	40,000	1990	LVP Organics		
T-609	40,000	1990	LVP Organics		
T-611	40,000	1990	LVP Organics		

**Table E-2: Tanks and Ponds Associated With
Wastewater Treatment and Fire Protection**

Tank or Pond No.	Type*	Capacity	Storage Service	Control Device	Notes
301	V, R	5,000	API oil/water separator	Carbon Canisters	Required to be equipped with carbon canisters
302	V, R	5,000	API oil/water separator	Carbon Canisters	Required to be equipped with carbon canisters
303	V	1,000	influent sump	Carbon Canisters	Required to be equipped with carbon canisters
304	V	1,000	influent sump	Carbon Canisters	Required to be equipped with carbon canisters

**VELSICOL CHEMICAL CORPORATION
CHESTERTOWN PLANT
PERMIT-TO-OPERATE
PERMIT No. 029-00001**

Tank or Pond No.	Type*	Capacity	Storage Service	Control Device	Notes
305	H Tank	5,000	organic skimming	Carbon Canisters	Required to be equipped with carbon canisters
306	V Tank	5,000	organic skimming	Carbon Canisters	Required to be equipped with carbon canisters
307	Pond	300,000	Fire Protection		
311	Sump	3,500	Outfall Sump		
312	Pond	10 Acres	Effluent Pond E – Rt 297		
313	Pond	176,796	Effluent Surge Pond		
315	Pond	146,392	Effluent Surge Pond		
316	Pond	221,713	Diluted Water Pond		
318	V tank	200,000	WWT Surge Tank		
340	V, CB Tank	10,000	1° WWT Sludge Storage	Carbon Canisters	Required to be equipped with carbon canisters
341	V, OT Tank	55,000	1° WWT Clarifier		
342	V Tank	1,000	1° WWT Clarifier Overflow Tank	Carbon Canisters	Required to be equipped with carbon canisters
343	V Tank	20,500	1° WWT Surge Tank	Carbon Canisters	Required to be equipped with carbon canisters
350	V Tank	1,400	Venturi Scrubber Tank		
358	V, OT Tank	328,000	Conc. WW Equalization		
360	V, OT Tank	496,418	2° WWT Bio Reactor		
361	V, OT, CB Tank	51,400	2° WWT Clarifier		
362	V, CB Tank	32,900	2° WWT Thickener		
363	V, CB Tank	5,000	2° WWT Recycle Tank		
364	V Tank	50	Phosphate Nutrient Tank		

*Abbreviations: V = vertical tank, H = horizontal tank, R = rectangular, CB = cone bottom, OT = open top, 1° = primary, 2° = secondary

STATE OF MARYLAND-DEPARTMENT OF THE ENVIRONMENT
Air Management Administration
1800 Washington Boulevard
Baltimore, MD 21230

OCT 17 2006

APPLICATION FOR PERMIT TO OPERATE PROCESS EQUIPMENT

I. PREMISE IDENTIFICATION:

Velsicol Chemical Corporation
PREMISE NAME OR IDENTIFICATION

029-0001
PREMISE NUMBER

10380 Worton Rd., Chestertown, MD 21620
PREMISE ADDRESS

Kent
COUNTY

II. EQUIPMENT IDENTIFICATION:

☐ SINGLE INSTALLATION ☒ PROCESS LINE ☐ IDENTICAL UNITS AND NO. _____

III. DESCRIBE EQUIPMENT AND ITS MAJOR FUNCTION. STATE TYPE AND SIZE EQUIPMENT AND TYPE CONTROL DEVICE ASSOCIATED WITH THIS EQUIPMENT ONLY.

Ester/Plasticizer manufacturing facility consisting of three reactors and associated equipment, raw material and finished product tanks, a wastewater treatment plant, two boilers, and three hot oil units. A thermal oxidizer and water scrubber control emissions from the reactor process. A dust collector and air handling system control particulates from raw material charging. Carbon drums are utilized on some storage tanks and wastewater treatment vessels to control VOC emissions.

IV. STATUS OF CONTROL EQUIPMENT:

(a) ☐ NO CONTROL EQUIPMENT NECESSARY. EMISSIONS _____

(b) ☒ EXISTING CONTROL EQUIPMENT SATISFACTORY. EMISSIONS _____

☐ YES ☒ NO EQUIPMENT STACK TESTED ON SITE. DATE _____

☐ YES ☒ NO EQUIPMENT TO BE TESTED, DATE _____

(c) ☐ CONTROL EQUIPMENT PRESENTLY BEING CONSTRUCTED OR SCHEDULED FOR CONSTRUCTION.

STARTING DATE _____ ESTIMATED COMPLETION DATE _____

☐ YES ☐ NO EQUIPMENT TO BE STACK TESTED, DATE _____

(d) ☐ NON-COMPLIANCE.

De 2 Cl

Plant Manager

SIGNATURE AND TITLE

10-13-06

DATE

DO NOT WRITE BELOW THIS LINE

FIELD REPORT

INSPECTOR:

DATE OF INSPECTION:

PERSON CONTACTED:

DISCUSSION, CONDITIONS AND RECOMMENDATION:

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

1800 Washington Boulevard • Baltimore, MD 21230

410-537-3000 • 1-800-633-6101

Robert L. Ehrlich, Jr.
GovernorKendal P. Philbrick
SecretaryMichael S. Steele
Lt. Governor

DEC 20 2006

Jonas A. Jacobson
Deputy Secretary

Ms. Joanne K. Szymanski, EHS Coordinator
Velsicol Chemical Corporation
10380 Worton Road
Chestertown MD 21620

Dear Ms. Szymanski:

Enclosed is the renewal of the State permit-to-operate for your ester (plasticizer) manufacturing facility located in Chestertown, MD. The permit has a five year term that will expire December 31, 2011. The permit includes the revisions to the facility's previous permit-to-operate that you requested in your letter of October 13, 2006. Please review your permit carefully. Velsicol is responsible for consistent compliance with all standards, limits and requirements included in the permit.

Please be reminded that an emissions-based permit fee must be paid annually and is due by the anniversary date of the permit. The Department will bill you prior to the anniversary date for the annual fee.

If you have any questions regarding the issuance of this renewal or the annual fee, please contact Mr. Ross Oliver of my staff at (410) 537-3931.

Sincerely,

Karen G. Irons, P.E., Administrator
Air Quality Permits Program
Air & Radiation Management Administration

KGI/aw

Enclosure

cc: Laramie Daniel with copy of permit
Kent County Health Department
Jay Bozman with copy of permit





MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

Martin O'Malley
Governor

September 25, 2008

Shari T. Wilson
Secretary

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Deputy Secretary

Ms. Elizabeth A. Karkula
Velsicol Chemical Corporation
10400 W. Higgins Road
Suite 600
Rosemont, IL 60018-3713

Reference: Permit No. 029-00001

Dear Ms. Karkula:

Thank you for notifying the Department of the change in ownership from Velsicol Chemical Corporation to Genovique Specialties Corporation, an ester (plasticizer) manufacturing facility located at 10380 Worton Road in Chestertown, Maryland. Enclosed please find an application form to transfer the current State Permit to Operate to the new owner. In addition to the application form, there is an attachment to be used to re-register the equipment/processes at the facility. Maryland air quality regulations found at COMAR 26.11.02.02A(2) state that a new owner shall register the source with the Department within 30 days of the change of ownership.

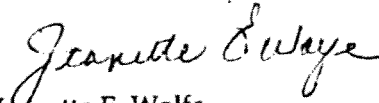
Please complete the application form to transfer the current Permit to Operate to the new owner and update the operational status of the equipment/processes that will occur upon the ownership change. Please indicate any changes in the column provided using the operational status codes at the bottom of the page. Note that if the new owner plans to replace equipment or add additional equipment, an application for a Permit to Construct (PTC) and issuance of the PTC by the Department may be required prior to installing new equipment. A permit is not required to shut down and/or remove equipment. If the new owner plans to make changes to a process line by removing one or more pieces from the operation, please describe the change so that the Department's registration information can be updated.

There is no fee for transferring the State Permit to Operate or for re-registering the source. There is an annual Permit to Operate fee that is due on the anniversary month of the permit, which for this facility is December 31. The amount of the annual fee is calculated by adding a \$200 base fee to an emissions-based component that relates to the quantity of certified emissions of regulated air pollutants from the operation of the facility. In the future, Genovique will be billed for the annual fee 60 days prior to the due date of the fee. The next invoice will be mailed to Genovique by November 1, 2008 and will be due December 31, 2008.

Page 2

Please note that this facility is not a Title V source as indicated in your letter of September 23, 2008. If you have any questions concerning the application form or registration process, please feel free to contact the permit engineer assigned to this facility, Mr. Ross Oliver at (410) 537-3225.

Sincerely,

A handwritten signature in cursive script, reading "Jeanette E. Wolfe".

Jeanette E. Wolfe
Permits Coordinator
Air Quality Permits Program
Air & Radiation Management Administration

Enclosures

cc: Judy Ciulis, VCC
Ross Oliver, Air Quality Permits Program

GENOVIQUE SPECIALTIES CORPORATION
STATE PERMIT TO OPERATE #029-00001

This permit was issued to cover the following registrations. Please indicate **OPERATIONAL STATUS** using codes found at the bottom of this page.

Registration No.	Description	Date of Installation	Operational Status Upon Change of Ownership (See codes below)
4-0074	One (1) Boiler (Permittee designation 250 C.B. boiler), rated at 10.5 MMBtu/hr heat input, fired with residual and distillate fuel oils, waste combustible fluids (WCF), and used oils.	01/1960	A
4-0075	One (1) Boiler (Permittee designation 700 C.B. boiler), rated at 29.3 MMBtu/hr heat input, fired with residual and distillate fuel oils, and used oils.	01/1968	A
6-0010	One (1) Hot Oil Heater (Permittee no. 2), rated at 15 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF, and used oils.	01/1974	A
6-0011	One (1) Hot Oil Heater (Permittee no. 3), rated at 14 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF, and used oils.	01/1968	A
6-0012	One (1) Hot Oil Heater (Permittee no. 1), rated at 10 MMBtu/hr heat input, fired with residual and distillate fuel oils, WCF, and used oils.	01/1967	A
7-0018	Equipment associated with one (1) esterification process as registered with the Department, including three (3) process reactors (Permittee designations K-121, K-127, and K-132) controlled by a regenerative thermal oxidizer (RTO) with a water scrubber for back-up control when the RTO cannot be operated.	01/1960	A
9-0010	One (1) wastewater treatment plant including an oil/water separator, clarifiers, an equalization tank, a bioreactor, a sludge de-watering unit, and other equipment as listed in Table E-2 under Part E of this permit.	01/1960	A
9-0013	One (1) tank farm comprising bulk storage tanks as listed in Table E-1 under Part E of this permit.	01/1960	A

OPERATIONAL STATUS CODES

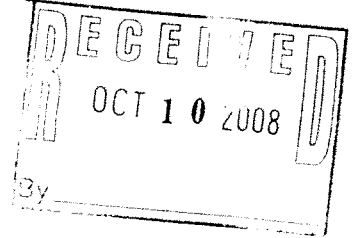
- (A) Active
- (D) Permanently shut down
- (P) Partially shut down (Describe)
- (I) Inactive
- (R) Will replace (Note a Permit to Construct is required before replacing)



GENOVIQUE
SPECIALTIES

Target Draft Due Date:

12/20/08



ELIZABETH A. KARKULA
GENERAL COUNSEL & CORPORATE SECRETARY
GENOVIQUE SPECIALTIES CORPORATION
10400 W. HIGGINS RD., SUITE 600
ROSEMONT, IL 60018
PH: (847) 635-3479
FX: (847) 298-0415
E-Mail: ekarkula@genovique.com

October 8, 2008

Ms. Jeanette Wolfe
Permits Coordinator
Maryland Department of the Environment
Air and Radiation Management Administration Suite 720
1800 Washington Boulevard
Baltimore, MD 21230

RE: Notification of Change; Permit Number 029-00001
Genovique Specialties Corporation @ 10380 Worton Rd., Chestertown, MD
21620

Dear Ms. Wolfe:

Pursuant to Maryland air quality regulations found at COMAR 26.11.02.02A(2) stating that a new owner shall register the source with the Department within 30 days of the change of ownership, Genovique Specialties Corporation hereby submits an Application for State Permit to Operate for Change of Ownership for its Chestertown, Maryland plant.

If you have any questions regarding this matter, please contact Judy Ciulis at 901-320-0293.

Sincerely,

Genovique Specialties Corporation


Elizabeth A. Karkula
General Counsel & Corporate Secretary

cc: Judy Ciulis, VC LLC

From: "Szymanski, Joanne" <jszymanski@genovique.com>
To: "Ross Oliver" <roliver@mde.state.md.us>
Date: 11/6/2008 11:12 AM
Subject: RE: Draft Permits

Ross,

Everything looks good, no comments.

Thank you for your patience in awaiting my reply.

Regards,

Joanne

Joanne K. Szymanski
Environmental Health and Safety Manager
Genovique(tm) Specialties Corporation
10380 Worton Rd.
Chestertown, MD 21620
410-778-1991, x252
410-778-5538, fax
e-mail: jszymanski@genovique.com

This e-mail, including any attachment(s), is intended for receipt and use by the intended addressee(s), and may contain confidential and privileged information. If you are not an intended recipient of this e-mail, you are hereby notified that any unauthorized use or distribution of this e-mail is strictly prohibited, and requested to delete this communication and its attachment(s) without making any copies thereof and to contact the sender of this e-mail immediately. Nothing contained in the body and/or header of this e-mail is intended as a signature or intended to bind the addressor or any person represented by the addressor to the terms of any agreement that may be the subject of this e-mail or its attachment(s), except where such intent is expressly indicated.

-----Original Message-----

From: Ross Oliver [mailto:roliver@mde.state.md.us]
Sent: Friday, October 24, 2008 5:07 AM
To: Szymanski, Joanne
Subject: Draft Permits

Joanne,

Attached are drafts of a permit-to-operate and permit-to-construct to be issued under the name of Genovique Specialties Corporation. Please let me know if you have any comments.

Ross

The information contained in this communication may be confidential, is intended only for the use of the recipient named above, and may be legally privileged.

If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication, or any of its contents, is strictly prohibited.

If you have received this communication in error, please re-send this communication to the sender and delete the original message and any copy of it from your computer system. Thank you.

<<<<GWIASIG 0.07>>>>



MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway • Baltimore, Maryland 21224
(410) 631-3000 • 1-800-633-6101 • <http://www.mde.state.md.us>

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

December 28, 2001

Ms. Joanne K. Szymanski
Velsicol Chemical Corporation
P.O. Box 120
10380 Worton Road
Chestertown, Maryland 21620

Re: State Discharge Permit No. 99-DP-0014 (NPDES No. MD0000345)

Dear Ms. Szymanski:

The recently issued permit referenced above contained an error regarding the effective period of the permit. The effective period should be February 1, 2002 through January 31, 2007. A copy of the corrected permit page is enclosed. I apologize for any inconvenience regarding this error.

If you have any questions regarding the permit term, please contact me at 410-631-3323. Questions regarding issues raised during the permit renewal process should be directed to the permit writer, John McGillen. Any other questions regarding permit compliance issues should be directed to the Compliance Program at 410-631-3510.

Sincerely,

Edwal F. Stone, Chief
Industrial Discharge Permits Division
Water Management Administration

EFS:kh

Enclosure

cc: Patricia Gleason, EPA Region III



MARYLAND DEPARTMENT OF THE ENVIRONMENT

2500 Broening Highway • Baltimore, Maryland 21224
(410) 631-3000 • 1-800-633-6101 • <http://www.mde.state.md.us>

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

DEC 27 2001

CERTIFIED MAIL

Ms. Joanne K. Szymanski
Velsicol Chemical Corporation
P.O. Box 120
10380 Worton Road
Chestertown, Maryland 21620

Re: State Discharge Permit 99-DP-0014 (NPDES Permit MD0000345)

Dear Ms. Szymanski:

Enclosed is the above discharge permit with the effective date indicated on the cover page. The permittee is responsible for complying with all permit conditions. You are therefore advised to read the permit carefully and become thoroughly familiar with the requirements.


Enclosed are Discharge Monitoring Report forms (EPA No. 3320-1) which must be completed for each reporting period and submitted to the Department in accordance with the requirements of the permit. You will also find enclosed a copy of the Federal Register, Part 136 - "Guidelines Establishing Test Procedures for Analysis of Pollutants". Unless otherwise specified, these guidelines are to be used for the analyses required by this permit.

Please direct all future correspondence regarding permit compliance to the following address:

Maryland Department of the Environment
Water Management Administration
Inspection and Compliance Program
2500 Broening Highway
Baltimore, Maryland 21224

If you have any questions, please do not hesitate to call John McGillen, Industrial Discharge Permits Division, at (410) 631-3323.

Sincerely,


Robert M. Summers, Director
Water Management Administration

RMS:kh

Enclosures



MARYLAND DEPARTMENT OF THE ENVIRONMENT

2500 Broening Highway • Baltimore, Maryland 21224

(410) 631-3000 • 1-800-633-6101 • <http://www.mde.state.md.us>

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

STATE DISCHARGE PERMIT NUMBER	99-DP-0014
NPDES PERMIT NUMBER	MD0000345
EFFECTIVE DATE	FEB 01 2001
EXPIRATION DATE	JAN 31 2006

Pursuant to the provisions of Title 9 of the Environment Article, Annotated Code of Maryland, and regulations promulgated thereunder, and the provisions of the Clean Water Act, 33 U.S.C. § 1251 et seq. and implementing regulations 40 CFR Parts 122, 123, 124, and 125, the Department of the Environment, hereinafter referred to as the "Department," hereby authorizes

Velsicol Chemical Corporation
P.O. Box 120
10380 Worton Road
Chestertown, Maryland 21620

TO DISCHARGE FROM

from a facility manufacturing plasticizers and synthetic lubricants

LOCATED AT

Maryland Route 297, Chestertown, Kent County, Maryland 21620

VIA OUTFALLS

001 and 002 as identified and described herein

TO

an unnamed tributary to Morgan Creek which is protected for water contact recreation, fishing, aquatic life, and wildlife in accordance with the following special and general conditions and map(s) made a part hereof.

SPECIAL CONDITIONS

A.1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the effective period of this permit, the permittee is authorized to discharge treated industrial wastewater, remediated groundwater and storm water via Outfall 001 (E:1058.5, N:522.0).

As specified below, such discharge shall be limited and monitored by the permittee at the 6-inch PVC pipe inside the KS Building.

PARAMETER	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				FREQUENCY OF ANALYSIS	SAMPLE TYPE	NOTES
	MONTHLY AVERAGE	DAILY MAXIMUM	UNITS	MINIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	UNITS			
Flow	Report	Report	gpd					Continuously	Measured & Recorded	(1)
Biochemical Oxygen Demand (BOD ₅)	22.0	44.0	lbs/day		Report	Report	mg/l	2/Month	Composite	(2)
Total Suspended Solids (TSS)	20.5	41.0	lbs/day		Report	Report	mg/l	2/Month	Composite	(2)
Bis(2-ethylhexyl) phthalate	0.0075	0.0203	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Di-n-butyl phthalate	0.0020	0.0041	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Diethyl phthalate	0.0059	0.0147	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Dimethyl phthalate	0.0014	0.0034	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Acenaphthene	0.0016	0.0043	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Acrylonitrile	0.0070	0.0176	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Benzene	0.0027	0.0099	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)

I. SPECIAL CONDITIONS

A.1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Continued

PARAMETER	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				FREQUENCY OF ANALYSIS	SAMPLE TYPE	NOTES
	MONTHLY AVERAGE	DAILY MAXIMUM	UNITS	MINIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	UNITS			
Carbon tetrachloride	0.0013	0.0028	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Chlorobenzene	0.0011	0.0020	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
1,2,4-trichlorobenzene	0.0049	0.0102	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Hexachlorobenzene	0.0011	0.0020	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
1,2-dichloroethane	0.0049	0.0153	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
1,1,1-trichloroethane	0.0015	0.0039	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Hexachloroethane	0.0015	0.0039	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
1,1-dichloroethane	0.0016	0.0043	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
1,1,2-trichloroethane	0.0015	0.0039	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Chloroethane	0.0075	0.0195	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Chloroform	0.0015	0.0033	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
2-chlorophenol	0.0023	0.0071	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
1,2-dichlorobenzene	0.0056	0.0118	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)

CONTINUED ON NEXT PAGE

I. SPECIAL CONDITIONS

A.1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Continued

PARAMETER	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				FREQUENCY OF ANALYSIS	SAMPLE TYPE	NOTES
	MONTHLY AVERAGE	DAILY MAXIMUM	UNITS	MINIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	UNITS			
1, 3-dichlorobenzene	0.0023	0.0032	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
1, 4-dichlorobenzene	0.0011	0.0020	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
1, 1-dichloroethylene	0.0012	0.0018	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
1, 2-trans-dichloro-ethylene	0.0015	0.0039	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
2, 4-dichlorophenol	0.0028	0.0081	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
1, 2-dichloropropane	0.011	0.0167	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
1, 3-dichloropropylene	0.0021	0.0032	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
2, 4-dimethylphenol	0.0013	0.0026	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
2, 4-dinitrotoluene	0.0082	0.0207	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
2, 6-dinitrotoluene	0.0185	0.0465	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Ethylbenzene	0.0023	0.0078	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Fluoroanthene	0.0018	0.0049	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Methylene Chloride	0.0029	0.0065	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Methyl Chlorine	0.0062	0.0138	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Hexachlorobutadiene	0.0015	0.0036	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)

CONTINUED ON NEXT PAGE

I. SPECIAL CONDITIONS

A.1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Continued

PARAMETER	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				FREQUENCY OF ANALYSIS	SAMPLE TYPE	NOTES
	MONTHLY AVERAGE	DAILY MAXIMUM	UNITS	MINIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	UNITS			
Naphthalene	0.0016	0.0043	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Nitrobenzene	0.0020	0.0049	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
2-nitrophenol	0.0030	0.0050	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
4-nitrophenol	0.0052	0.0090	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
2,4-dinitrophenol	0.0052	0.0089	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
4,6-dinitro-o-cresol	0.0057	0.0201	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Phenol	0.0011	0.0019	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Benzo(a)anthracene	0.0016	0.0043	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Benzo(a)pyrene	0.0017	0.0044	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
3,4-benzofluoranthene	0.0017	0.0044	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Benzo(k)fluoranthene	0.0016	0.0043	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Chrysene	0.0016	0.0043	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Acenaphthylene	0.0016	0.0043	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Anthracene	0.0016	0.0043	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)

CONTINUED ON NEXT PAGE

I. SPECIAL CONDITIONS

A.1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Continued

PARAMETER	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				FREQUENCY OF ANALYSIS	SAMPLE TYPE	NOTES
	MONTHLY AVERAGE	DAILY MAXIMUM	UNITS	MINIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	UNITS			
Fluorene	0.0016	0.0043	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Phenanthrene	0.0016	0.0043	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Pyrene	0.0018	0.0048	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Tetrachloroethylene	0.0016	0.0041	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Toluene	0.0019	0.0058	lbs/day		Report	Report	mg/l	1/Quarter	Grab	(1)
Trichloroethylene	0.0015	0.0039	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Vinyl Chloride	0.0075	0.0195	lbs/day		Report	Report	mg/l	1/Six Months	Grab	(1)
Cyanide, Free						0.022	mg/l	1/Six Months	Grab	(1)
PH				6.5		8.5		1/Week	Grab	

There shall be no discharge of floating solids or persistent foam in other than trace amounts. Persistent foam is foam that does not dissipate within one half-hour of point of discharge.

(1) Monitoring required.

(2) The permittee has requested a 301(g) variance for these pollutants. If EPA denies the variance request, the permit will be reopened to implement the alternative limits resulting from EPA's decision. The permittee shall certify on the Discharge Monitoring Report that the previously submitted variance request remains accurate and representative of current operating conditions.

I. SPECIAL CONDITIONS

A.2. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the effective period of this permit, the permittee is authorized to discharge storm water via Outfall 002 (E:1058.5, N:522.0).

As specified below, such discharge shall be limited and monitored by the permittee at the 24-inch concrete pipe located on the western side of Route 297.

PARAMETER	QUANTITY OR LOADING			QUALITY OR CONCENTRATION			FREQUENCY OF ANALYSIS	SAMPLE TYPE	NOTES
	MONTHLY AVERAGE	DAILY MAXIMUM	UNITS	MINIMUM	MONTHLY AVERAGE	DAILY MAXIMUM			
Flow	Report	Report	gpd				1/Quarter	Estimated	(1)
Chemical Oxygen Demand					Report	Report	1/Quarter	Grab	(1)(2)
pH				6.0		8.5	1/Quarter	Grab	(2)

There shall be no discharge of floating solids or persistent foam in other than trace amounts. Persistent foam is foam that does not dissipate within one half-hour of point of discharge.

(1) Monitoring required.

(2) The sample must be taken during or immediately after the first precipitation event of each month that occurs during working hours and causes storm water to be discharged. A precipitation event shall be any precipitation which results in accumulation of greater than 0.2 inches of liquid water.

I. SPECIAL CONDITIONS

B. DEFINITIONS

1. The "monthly, quarterly, semi-annual, or annual average" effluent concentration means the value calculated by computing the arithmetic mean of all the daily determinations of concentration made during any calendar-month, 3-month, 6-month, or 12-month period respectively.
2. The "daily maximum" effluent concentration means the highest reading of any daily determination of concentration.
3. "Daily determination of concentration" means one analysis performed on any given sample representing flow during a calendar day, with one number in mg/l or other appropriate units as an outcome.
4. The "monthly, quarterly, semi-annual, or annual average" effluent limitation by mass loading means the highest allowable value calculated by computing the arithmetic mean of all the daily determinations of discharge of a constituent by mass loading made during any calendar month, 3-month, 6-month, or 12-month period, respectively.
5. The "daily maximum" effluent limitation by mass loading means the highest allowable daily determination of discharge of a constituent by mass loading during a 24-hour period.
6. "Daily determination of discharge of constituents by mass loading" means a value which is calculated by multiplying the daily determination of concentration times flow in millions of gallons per day times 8.34. This results in a mass loading expressed in pounds per day.
7. "Grab sample" means an individual sample collected in less than 15 minutes. Grab samples collected for pH and total residual chlorine shall be analyzed within 15 minutes of time of sample collection.
8. "Bypass" means the intentional diversion of wastes from any portion of a treatment facility.
9. "Upset" means the exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
10. "Estimated" flow means a calculated volume or discharge rate which is based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters, and batch discharge volumes.
11. "Measured" flow means any method of liquid volume measurement the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.

C. TOXIC POLLUTANT REPORTING

The permittee shall notify the Department as soon as it is known or suspected that any toxic pollutants which are not specifically limited by this permit have been discharged at levels specified in 40 CFR Part 122.42(a).

D. REMOVED SUBSTANCES

1. Within 30 days after notification by the Department, the permittee shall provide information on the disposal of any removed substances, as defined by General Condition B.7, including the following information:
 - a. A suitable map showing all areas used for disposal of removed substances.
 - b. The physical, chemical, and biological characteristics, as appropriate; quantities of any removed substances; and the method of disposal.
 - c. If disposal is handled by persons other than the permittee, identification of the contractor or subcontractor, their mailing address, and the information specified in a and b above.
2. The Department's notification may also require the permittee to provide the above information prior to the use of new or additional disposal areas, contractors, or subcontractors.

E. ANALYTICAL LABORATORY

Within 30 days after the effective date of this permit, the permittee shall submit to the Department (attn: Industrial Discharge Permits Division) the name and address of the analytical laboratory (including the permittee's own laboratory) which is used to perform the monitoring required by this permit.

If the laboratory changes during the effective period of this permit, the permittee shall notify the Department of the new laboratory within 30 days after the change.

F. WASTEWATER OPERATOR CERTIFICATION

As of the effective date of this permit, the permittee's facility shall be operated by an industrial wastewater operator duly certified by the Maryland Board of Waterworks and Waste Systems Operators. Certification shall be for operation of a Class 5 industrial wastewater works, unless the Board determines that a different classification is appropriate. At no time during the effective period of this permit shall the treatment facilities be operated for more than six months without a certified operator.

G. FLOW MONITORING

In lieu of providing measured flow (defined in Special Condition Definitions section), the permittee may estimate flows and submit the following information with their discharge monitoring report in the first quarter of each calendar year:

- a. a description of the methodology used to estimate flow at each outfall where flow measurement equipment is not present;
- b. documentation appropriate to the methodology utilized which provides information necessary to support the validity of the reported flow estimate. If actual measurements or observations are made, a description of typical sampling times, locations, and persons performing the measurements/observations should also be provided.
- c. a description of the factors (e.g., batch discharges, intermittent operation, etc.) which cause flow at the outfall to fluctuate significantly from the estimate provided.

H. FLOW BASIS FOR ANNUAL DISCHARGE PERMIT FEE

The Department will calculate permit fees annually and will invoice the permittee based upon average discharge flow. Permit fees are payable in advance to the Department by July 1 of each fiscal year (July 1 through June 30).

The permittee shall provide to the Department's Industrial Discharge Permits Division by May 1 of each year an updated average discharge flow value for the next billing period if the flow volume used to calculate the most recent annual permit fee (or, if the permit was renewed within the past year, the flow volume used to calculate the application fee) differs significantly from either of the following flow determinations:

- a. average flow data from the current fiscal year as reported on the permittee's discharge monitoring reports, or
- b. the estimated flow volume for the next billing period based upon recent changes at the facility.

The permittee shall include with their flow revision notification a summary of flow data reported on discharge monitoring reports for the previous year and any other supporting documentation to be used as the basis for the flow determination.

I. REAPPLICATION FOR A PERMIT

The Department is implementing a schedule for issuance of discharge permits grouped by geographical areas (watersheds). To implement the watershed-based schedule, the Department may revoke and reissue this permit concurrently with other permits in the watershed. Unless the Department grants permission for a later date, the permittee shall submit a renewal application by no later than 02/01/2005, or notify the Department of the intent to cease discharging by the expiration date. In the event that a timely and sufficient reapplication has been submitted and the Department is unable, through no fault of the permittee, to issue a new permit before the expiration date of this permit, the terms and conditions of this permit are automatically continued and remain fully effective and enforceable.

J. BIOMONITORING PROGRAM

1. Within three months after the effective date of the permit, the permittee shall submit to the Department for approval a study plan to evaluate wastewater toxicity at Outfall 001 by using biomonitoring. The study plan should include a discussion of:
 - a. wastewater and production variability;
 - b. sampling & sample handling;
 - c. source & age of test organisms;
 - d. source of dilution water;
 - e. testing procedures/experimental design;
 - f. data analysis;
 - g. quality control/quality assurance;
 - h. report preparation; and
 - i. testing schedule.
2. The testing program shall consist of definitive quarterly testing for one year. Three of the quarters shall have acute testing and one of the quarters shall have chronic testing. This testing shall be initiated no later than three months following the Department's acceptance of the study plan or according to an approved schedule in the study plan.
 - a. The acute testing shall consist of 48-hour static renewal tests using fathead minnow and the 48-hour static renewal tests using a daphnid.

- b. The chronic testing shall include the Ceriodaphnia survival and reproduction test and the fathead minnow larval survival and growth test.
 - c. If the receiving water is estuarine, the permittee may elect to substitute estuarine species for those species specified above. Approved estuarine species for acute testing are sheepshead minnows, silversides, grass shrimp, and mysid shrimp. Approved estuarine species for chronic testing are sheepshead minnow, inland silverside, and mysid shrimp. In all cases, testing must include one vertebrate species and one invertebrate species.
 - d. Acute test results shall be expressed as LC_{50} . Chronic test results shall be expressed as NOEC, LOEC, ChV, and IC_{25} .
3. The samples used for biomonitoring shall be collected at the same time and location as the samples analyzed for the effluent limitations and monitoring requirements for this outfall. For chlorinated effluents, samples shall be collected after dechlorination.
4. The following EPA documents discuss the appropriate methods:
 - a. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, August, 1993, EPA/600/4-90/027F.
 - b. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, July 1994, EPA/600/4-91/003.
 - c. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, July, 1994, EPA/600/4-91/002.
5. Test results shall be submitted to the Department within one month of completion of each set of tests.
6. Test results shall be reported in accordance with MDE/WMA "Reporting Requirements for Effluent Biomonitoring Data".
7. As a minimum, the reported chronic results shall be expressed as NOEC, LOEC, ChV, and IC_{25} .
8. If significant mortality occurs during the first 48 hours of the chronic tests, 48-hour LC_{50} s shall be calculated and reported along with the chronic results.
9. If testing is not performed in accordance with MDE-approved study plan, additional testing may be required by the Department.
10. If the test results indicate that the effluent is toxic, additional biomonitoring or a toxicity reduction evaluation will be required by the Department.
11. If plant processes or operations change so that there is a significant change in the nature of the wastewater, the Department may require the permittee to conduct a new set of tests.
12. Submit all biomonitoring related materials to:

Maryland Department of the Environment
Water Management Administration
Inspection and Compliance Program
2500 Broening Highway
Baltimore, Maryland 21224

K. TOXICITY REDUCTION EVALUATION

The permittee shall conduct a Toxicity Reduction Evaluation (TRE) when a review of toxicity test data by the Department indicates unacceptable acute or chronic effluent toxicity. A TRE is an investigation conducted to identify the causative agents of effluent toxicity, isolate the source(s), determine the effectiveness of control options, implement the necessary control measures and then confirm the reduction in toxicity.

1. Within 90 days following notification by the Department that a TRE is required, the permittee shall submit a plan of study and schedule for conducting a TRE. The permittee shall conduct the TRE study consistent with the submitted plan and schedule.
2. This plan should follow the framework presented in Generalized Methods for Conducting Industrial Toxicity Reduction Evaluations (EPA/600/2-88/070).
3. Beginning 60 days following the date of the Department's acceptance of the TRE study plan and every 60 days thereafter, the permittee shall submit progress reports including all relevant test data to the Department. This shall continue until completion of the toxicity reduction confirmation.
4. Within 60 days following completion of the toxicity identification, or the source identification phase of the TRE, the permittee shall submit to the Department a plan and schedule for implementing those measures necessary to eliminate acute toxicity and/or reduce chronic toxicity to acceptable levels. The implementation of these measures shall begin immediately upon submission of this plan.
5. Within 60 days after completing implementation of the control measures to eliminate or reduce toxicity, the permittee shall submit to the Department for approval a study plan to confirm the elimination or reduction of toxicity by using biomonitoring.
6. If, for any reason, the implemented measures do not result in compliance with the Department's toxicity limitations, the permittee shall continue the TRE.

L. GROUNDWATER MONITORING

1. The permittee shall maintain and operate monitoring wells as shown on the attached site plan. The Department reserves the right to require additional monitoring wells, if necessary.
2. All operating wells shall be sampled at the frequencies specified in the attached schedule for the following: total organic carbon, chemical oxygen demand, toxic organics, and pH. The toxic organic test shall consist of the volatile and base/neutral fractions. In addition, the permittee shall measure the water level of all operating wells once per month. The above results and measurements shall be submitted to the Department as per General Condition A.2.
3. Prior to sampling, the permittee shall evacuate three times the wetted volume in the well's casing. The permittee shall also use a hand bailer to collect the appropriate sample.

M. SLUDGE HANDLING AND MONITORING

1. The permittee is authorized to land apply biological sludge on the drying beds.
2. The permittee shall submit a chemical analysis of the sludge once per year on the anniversary date of the permit. This analysis shall test for the following constituents: total cadmium, total mercury, total nickel, total lead, total zinc, and total organics. The total organics test shall consist

of the volatile and base/neutral fractions of the GC/MS analysis. In addition, the soil pH of each drying bed shall be tested at the same time as the sludge. The soil pH shall be greater than 6.2. These results shall be reported to the Department as per General Condition II.A.2.

N. API SEPARATOR

Once per month, the permittee shall make a visual inspection of the API separator and remove any sludge that has accumulated to a depth of one half the volume of the vessel. The date and results of these inspections shall be recorded in a logbook listing the name of the person performing the inspection.

O. TMDL REOPENER

When a Total Maximum Daily Load (TMDL) for Morgan Creek is completed this permit maybe reopened and new limitations proposed which may not be equal to the limitations in Special Condition A.

P. STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY

1. Storm Water Pollution Prevention Plans - General

The permittee shall develop a storm water pollution prevention plan for each area of the facility with point source discharges of storm water associated with industrial activity. The storm water pollution prevention plan shall be prepared in accordance with sound engineering practices. The plan shall identify potential sources of pollution which may reasonably be expected to affect the

quality of storm water discharges associated with industrial activity from the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit.

- a. In developing this plan, the permittee shall use as a reference "Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices" (EPA Document #EPA832-R-92-006) or, when it is available, an EPA-published summary document on the same subject. These documents can be obtained from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161 (phone: 703-487-4600).
- b. The plan shall be signed in accordance with II.C.18, and be retained on site in accordance with II.C.1 of this permit. The plan shall be completed within one year after the effective date of this permit. The permittee shall comply with the terms of the plan within 18 months after the effective date of this permit. In the case of facilities which prior to this permit were covered under the Department's general permit for storm water associated with industrial activity or were required to have a plan under their previous individual NPDES permit, the plan shall be completed and implemented prior to the effective date of this permit. The permittee shall make plans available upon request to the Department, and in the case of a storm water discharge associated with industrial activity which discharges to a municipal separate storm sewer system with an NPDES permit, to the municipal operator of the system.
- c. If the plan is reviewed by the Department, the Department may notify the permittee, at any time, that the plan does not meet one or more of the minimum requirements of this Part. After such notification from the Department, the permittee shall make changes to the plan to meet the objections of the Department and shall submit to the Department a written certification that the requested changes have been made and implemented. Unless otherwise provided by the Department, the permittee shall have 90 days after such notification to make the necessary changes.

- d. The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance which has a significant effect on the potential for the discharge of pollutants to the waters of the State or if the storm water pollution prevention plan proves to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Amendments to the plan may be reviewed by the Department in the same manner as 1.c above.

2. Storm Water Pollution Prevention Plan - Contents

The plan shall include, at a minimum, the following items:

- a. The plan shall provide a **description of potential sources** which may be reasonably expected to add significant amounts of pollutants to storm water discharges. The plan shall identify all activities and significant materials which may potentially be significant pollutant sources. Each plan shall include:
 - i. A site map indicating an outline of the drainage area of each storm water outfall; each existing structural control measure to reduce pollutants in storm water runoff; and surface water bodies, including drainage ditches and wetlands.
 - ii. A topographic map (or other map, if a topographic map is unavailable), extending one-quarter of a mile beyond the property boundaries of the facility. The requirements of this condition may be included in the site map required under 2.a.i. above, if appropriate.
 - iii. A narrative description of significant materials that have been treated, stored, or disposed in a manner which allowed exposure to storm water at anytime from three years prior to date of issuance of this permit until the time the present method of on-site storage or disposal was initiated; materials management practices employed to minimize contact of these materials with storm water runoff; materials loading and access areas; the location and a description of existing structural and non-structural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.
 - iv. For each area of the facility that generates storm water discharges associated with industrial activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow, and an estimate of the types of pollutants which are likely to be present in storm water discharges associated with industrial activity; and
 - v. A summary of all existing sampling data describing pollutants in storm water discharges.
- b. The permittee shall develop a description of **storm water management controls** appropriate for the facility, and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls:
 - i. A **preventive maintenance** program that involves timely inspection and maintenance of storm water management devices (cleaning oil/water separators, catch basins) as well as inspecting and testing plant equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

- ii. **Good housekeeping** that requires the maintenance of a clean, orderly facility.
 - iii. **Spill prevention and response** procedures shall be identified in the plan and made known to the appropriate personnel. The necessary equipment to implement a cleanup shall be available to the appropriate personnel.
 - iv. The plan shall **prevent sediment and erosion** by identifying areas which, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identifying measures to limit erosion.
 - v. The plan shall contain a narrative consideration of the appropriateness of traditional **storm water management practices** (practices other than those which control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site. The plan shall provide that measures determined to be reasonable and appropriate shall be implemented and maintained. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity (see 2.a. - description of potential pollutant sources) shall be considered when determining reasonable and appropriate measures. Appropriate measures may include: vegetative swales and practices, reuse of collected storm water (such as for a process or as an irrigation source), inlet controls (such as oil/water separators), snow management activities, infiltration devices, and wet detention/retention devices.
 - vi. Qualified plant personnel shall be identified to **visually inspect** designated equipment and plant areas. A site inspection shall be conducted annually by such personnel to verify that the description of potential pollutant sources required under 2.a. is accurate, the drainage map has been updated to reflect current conditions, and the controls to reduce pollutants identified in the storm water pollution prevention plan are being implemented and are adequate. In particular, material handling areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. A tracking or follow-up procedure shall be used to ensure that each inspection results in an appropriate response.
 - vii. Spills or other discharge incidents, and information describing the quality and quantity of storm water discharges shall be in the **facility records**. Maintenance activities shall be documented and recorded with inspection and discharge records. All records shall be maintained at the facility, for a minimum of three years. This period shall be automatically extended during the course of litigation, or when requested by the Department.
- c. Storm water management programs may include requirements for Spill Prevention Control and Countermeasure (SPCC) plans under Section 311 of the Clean Water Act or Best Management Practices (BMPs) programs otherwise required by an NPDES permit and may incorporate any part of such plans into the storm water pollution prevention plan by reference.
- d. Special Requirements for Storm Water Discharges Associated with Industrial Activity to Municipal Separate Storm Sewer Systems Serving a Population of 100,000 or More: Facilities covered by this permit shall comply with applicable requirements in municipal storm water management programs developed under State/NPDES permits issued for the discharge of the municipal separate storm sewer system that receives the facility's discharge, provided the municipal operator has notified the discharger of such conditions. These facilities shall make storm water pollution prevention plans available to the municipal operator of the system upon request.

- e. **Storage piles of salt** used for deicing or other commercial or industrial purposes shall be enclosed or covered to prevent exposure to precipitation.
 - f. The description of the storm water **Pollution Prevention Committee** shall identify specific individuals within the plant organization who are responsible for developing the storm water pollution prevention plan and assisting the plant manager in its implementation, maintenance, and revision. The activities and responsibilities of the committee should address all aspects of the facility's storm water pollution prevention plan.
 - g. **Employee training** programs shall inform personnel at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics, such as spill response, good housekeeping and material management practices. A pollution prevention plan shall identify periodic dates for such training.
3. Storm Water Pollution Prevention Plan - Additional Requirements For Facilities Subject To SARA Title III, Section 313 Requirements

Storm water pollution prevention plans for facilities subject to reporting requirements under SARA Title III, Section 313 (42 U.S.C. § 11023) are required to include, in addition to the information listed in condition 2., a discussion of the facility's conformance with the following (appropriate) guidelines:

- a. In areas where Section 313 water priority chemicals are stored, processed or otherwise handled, appropriate containment, drainage control and/or diversionary structures shall be provided. At a minimum, one of the following preventive systems or its equivalent shall be used:
 - i. Curbing, culverting, gutters, sewers or other forms of drainage control to prevent or minimize the potential for storm water runoff to come into contact with significant sources of pollutants; or
 - ii. Roofs, covers, liners, or other forms of appropriate protection to prevent storage piles from leaching or exposure to storm water and wind.
- b. The storm water pollution prevention plan shall include a complete discussion of measures taken to conform with the following applicable guidelines, other effective storm water pollution prevention procedures, and applicable State rules, regulations, and guidelines.
 - i. No tank or container shall be used for the storage of a Section 313 water priority chemical unless its material and construction are compatible with the material stored and conditions of storage, such as pressure and temperature, etc. **Liquid storage areas for Section 313 water priority chemicals** shall be operated to minimize discharges of Section 313 chemicals by means such as secondary containment for at least the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation, a strong spill contingency and integrity testing plan, and/or other equivalent measures.
 - ii. **Truck and rail car loading and unloading areas for liquid Section 313 water priority chemicals** shall be operated to minimize discharges of Section 313 water priority chemicals by means such as the placement and maintenance of drip pans (including the proper disposal of materials collected in the drip pans) where spillage may occur (such as hose connections, hose reels and filler nozzles) for use when making and breaking hose connections; a strong spill contingency and integrity testing plan; and/or other equivalent measures.

- iii. **In plant areas where Section 313 water priority chemicals are transferred, processed or otherwise handled,** piping, processing equipment and materials handling equipment shall be designed and operated so as to prevent discharges of Section 313 chemicals, and be composed of materials that are compatible with the substances handled. Additional protection, such as covers or guards to prevent wind blowing, spraying or releases from pressure relief vents from causing a discharge of Section 313 water priority chemicals to the drainage system shall be provided, as appropriate, to control the releases.
- iv. **Discharges from secondary containment areas.**
 - (a) Drainage from secondary containment shall be restrained by valves or other positive means to prevent a spill or other excessive leakage of Section 313 water priority chemicals into the drainage system. After a visual inspection of the storm water and determination that no product is present, containment areas may be emptied by pumps or ejectors; however, these shall be manually activated.
 - (b) Flapper-type drain valves shall not be used to drain containment areas. Valves used for the drainage of containment areas shall be of manual, open-and-close design.
 - (c) Records of the frequency and estimated volume (in gallons) of discharges from containment areas shall be kept at the facility for a minimum of three years.
 - (d) In lieu of facility drainage engineered as described above, the final discharge of all in-facility storm sewers shall be equipped with a diversion system that could, in the event of an uncontrolled spill of Section 313 water priority chemicals, return the spilled material to the facility.
 - (e) Areas of the facility [those not addressed in paragraphs (i), (ii), or (iii)], from which runoff which may contain Section 313 water priority chemicals or spills of Section 313 water priority chemicals and which could cause a discharge shall incorporate the necessary drainage or other control features to prevent discharge of spilled or improperly disposed material and ensure the mitigation of pollutants in runoff or leachate.
- c. Facilities shall have the **necessary security** systems to prevent accidental or intentional entry which could cause a discharge. Security systems shall be described in the plan and address fencing, lighting, vehicular traffic control, and securing of equipment and buildings.
- d. The storm water pollution prevention plan shall **assess the potential of various sources at the plant to contribute pollutants** to storm water discharges associated with industrial activity. The plan shall include an inventory of the types of materials handled. Facilities shall include in the plan a description of releases to land or water of SARA Title III water priority chemicals that have occurred at any time after July 1, 1989. Each of the following shall be evaluated for the reasonable potential for contributing pollutants to runoff: loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and on-site waste disposal practices. Factors to consider include the toxicity of chemicals; quantity of chemicals used, produced, or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants.

4. Storm Water Pollution Prevention Plan - Additional Requirements For Construction Activity

This permit also authorizes the discharge of storm water associated with construction activity controlled by the permittee and associated with an industrial facility that is or will be regulated by this permit. "**Construction activity**" means clearing, grading, and excavation activities except: operations that result in the disturbance of less than five acres (or whatever threshold is currently specified in 40 CFR 122.26) of total land area which are not a part of a larger common plan of development or sale. "**Storm water associated with construction activity**" means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to clearing, grading, and excavation activities. For this permit, groundwater that seeps into construction excavations shall be considered and regulated as storm water.

- a. If the permittee is planning construction activity (disturbing five or more acres) at this facility, the permittee must submit an amendment to the permit application, which includes the party responsible for the construction activity, at least 48 hours prior to any land disturbing activities. The amendment, which may be presented using the Notice of Intent Form provided for the general permit for storm water associated with industrial activity, shall include the following information:
 - i. County, name and address (location) of the facility;
 - ii. Name and telephone number of the facility contact;
 - iii. Written description of industrial activity taking place;
 - iv. One four-digit SIC code that best represent the principal products or activities provided by the facility;
 - v. Watershed basin code;
 - vi. The latitude and longitude of the approximate center of the facility to the nearest 15 seconds;
 - vii. The name of the receiving water(s), or if the discharge is to a municipal separate storm sewer, the name of the municipal operator of the storm sewer and the ultimate receiving water(s);
 - viii. Permit number of any other NPDES permit issued for the facility;
 - ix. Area of industrial activity at facility in acres;
 - x. Status of owner/operator (private, Federal, etc);
 - xi. Federal tax ID number;
 - xii. Name and mailing address of applicant (company that operates the permitted facility);
 - xiii. Name and telephone number of operator contact;
 - xiv. A summary of all existing quantitative data, if any, describing the concentration of pollutants in storm water discharges;

- xv. Where construction is involved, a brief project description, including existing and proposed land uses. "**Project**" means the total area upon which construction activity will occur through stages or phases over time;
 - xvi. Where construction is involved, the total site area, the total proposed disturbed area, the type(s) of storm water management best management practice(s) (BMP) proposed, and the total drainage area to be controlled by each type of BMP; and
 - xvii. Signature of permittee.
- b. Prior to commencing construction, the permittee shall obtain approved erosion and sediment control plans in accordance with the requirements established in Title 4, Subtitle 1 of the Environment Article, Annotated Code of Maryland (Sediment Control); and in Code of Maryland Regulations (COMAR) 26.09.01 (Erosion and Sediment Control); and shall obtain approved storm water management plans in accordance with the requirements established in Title 4, Subtitle 2 of the Environment Article, Annotated Code of Maryland (Storm Water Management); and in COMAR 26.09.02 (Storm Water Management).
- c. For the purposes of monitoring, permittees must do all of the following:
- i. During construction, maintain at the site the approved erosion and sediment control plan.
 - ii. Conduct the following inspections:
 - (a) weekly inspections of implemented erosion and sediment controls; and
 - (b) inspections of erosion and sediment controls the next business day after a rainfall event resulting in runoff.
 - iii. During construction, maintain at the site written reports of all inspections conducted by the permittee that include:
 - (a) the date and time of the inspection;
 - (b) the name(s) of the individual(s) who performed the inspection;
 - (c) an assessment of the condition of erosion and sediment controls;
 - (d) a description of any erosion and sediment control implementation and maintenance performed; and
 - (e) a description of the site's present phase of construction.
 - iv. Maintain all inspection reports and enforcement actions issued to the permittee by the appropriate enforcement authority.
 - v. Permittees must retain the records described in condition 4.b.i, iii, and iv. and records of all data used to amend the application for this permit for a period of three (3) years from the date that the site is finally stabilized.
 - a. It is a condition of this permit that the permittee comply with erosion and sediment control and storm water management plans approved in accordance with the laws and regulations cited in condition 4.a. above, and with all conditions of this permit.

- b. Once construction has commenced, it is a condition of this permit that erosion and sediment control and storm water management plan approvals be kept in effect. Construction activity may not continue if these plans have expired, but may resume once plans are renewed without payment of an additional fee.

II. GENERAL CONDITIONS

A. MONITORING AND REPORTING

1. REPRESENTATIVE SAMPLING

Samples and measurements taken as required herein shall be taken at such times as to be representative of the quantity and quality of the discharges during the specified monitoring periods.

2. REPORTING-MONITORING RESULTS SUBMITTED MONTHLY

Monitoring results obtained during each calendar month shall be summarized on a Discharge Monitoring Report Form (EPA No. 3320-1) and submitted to the Department postmarked no later than the 28th day of the following month. Reporting periods shall end on the last day of each month. Duplicate signed copies of the Discharge Monitoring Reports shall be submitted to:

Maryland Department of the Environment
Water Management Administration
Inspection and Compliance Program
2500 Broening Highway
Baltimore, Maryland 21224

and to

U.S. Environmental Protection Agency Region III
Office of Compliance and Enforcement
NDPES Branch (3WP31)
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

3. SAMPLING AND ANALYSIS METHODS

The analytical and sampling methods used shall conform to procedures for the analysis of pollutants as identified in Title 40 CFR Part 136 - "Guidelines Establishing Test Procedures for the Analysis of Pollutants" unless otherwise specified.

4. DATA RECORDING REQUIREMENTS

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. the exact place, date, and time of sampling or measurement;
- b. the person(s) who performed the sampling or measurement;
- c. the dates and times the analyses were performed;
- d. the person(s) who performed the analyses;
- e. the analytical techniques or methods used; and
- f. the results of all required analyses.

5. MONITORING EQUIPMENT MAINTENANCE

The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation to insure accuracy of measurements.

6. ADDITIONAL MONITORING BY PERMITTEE

If the permittee monitors any pollutant, using approved analytical methods as specified above, at the locations designated herein more frequently than required by this permit, the results of such monitoring, including the increased frequency, shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report form (EPA No. 3320-1).

7. RECORDS RETENTION

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed, calibration and maintenance of instrumentation, and original recordings from continuous monitoring instrumentation shall be retained for a minimum of three years. This period shall be automatically extended during the course of litigation, or when requested by the Department.

B. MANAGEMENT REQUIREMENTS

1. CHANGE IN DISCHARGE

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit at a level in excess of that authorized shall constitute a violation of the terms and conditions of this permit. Anticipated facility expansions, production increases or decreases, or process modifications, which will result in new, different, or an increased discharge of pollutants, shall be reported by the permittee by submission of a new application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Department. Following such notice, the permit may be modified by the Department to specify and limit any pollutants not previously limited.

2. NONCOMPLIANCE WITH EFFLUENT LIMITATIONS

If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum or daily minimum effluent limitation specified in this permit, the permittee shall notify the Inspection and Compliance Program by telephone at (410) 631-3510 within 24 hours of becoming aware of the noncompliance. Within five calendar days, the permittee shall provide the Department with the following information in writing:

- a. a description of the noncomplying discharge including its impact upon the receiving waters;
- b. cause of noncompliance;
- c. anticipated time the condition of noncompliance is expected to continue or if such condition has been corrected, the duration of the period of noncompliance;
- d. steps taken by the permittee to reduce and eliminate the noncomplying discharge;
- e. steps to be taken by the permittee to prevent recurrence of the condition of noncompliance; and

- f. a description of the accelerated or additional monitoring by the permittee to determine the nature and impact of the noncomplying discharge.

3. FACILITIES OPERATION

All treatment, control and monitoring facilities, or systems installed or used by the permittee, are to be maintained in good working order and operated efficiently.

4. ADVERSE IMPACT

The permittee shall take all reasonable steps to minimize or prevent any adverse impact to waters of the State or to human health resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. BYPASSING

Any bypass of treatment facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited unless:

- a. the bypass is unavoidable to prevent a loss of life, personal injury or substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources;
- b. there are no feasible alternatives;
- c. notification is received by the Department within 24 hours (if orally notified, then followed by a written submission within five calendar days of the permittee's becoming aware of the bypass). Where the need for a bypass is known (or should have been known) in advance, this notification shall be submitted to the Department for approval at least ten calendar days before the date of bypass or at the earliest possible date if the period of advance knowledge is less than ten calendar days; and
- d. the bypass is allowed under conditions determined by the Department to be necessary to minimize adverse effects.

6. CONDITIONS NECESSARY FOR DEMONSTRATION OF AN UPSET

An upset shall constitute an affirmative defense to an action brought for noncompliance with technology-based effluent limitations only if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence, that:

- a. an upset occurred and that the permittee can identify the specific cause(s) of the upset;
- b. the permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;
- c. the permittee submitted a 24-hour notification of upset in accordance with the reporting requirements of General Condition II.B.2 above;
- d. the permittee submitted, within five calendar days of becoming aware of the upset, documentation to support and justify the upset; and
- e. the permittee complied with any remedial measures required to minimize adverse impact.

7. REMOVED SUBSTANCES

Wastes such as solids, sludges, or other pollutants removed from or resulting from treatment or control of wastewaters, or facility operations, shall be disposed of in a manner to prevent any removed substances or runoff from such substances from entering or from being placed in a location where they may enter the waters of the State.

8. POWER FAILURE

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- a. provide an alternative power source sufficient to operate the wastewater collection and treatment facilities or,
- b. halt, reduce or otherwise control production and all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater collection and treatment facilities.

C. RESPONSIBILITIES

1. RIGHT OF ENTRY

The permittee shall permit the Secretary of the Department, the Regional Administrator for the Environmental Protection Agency, or their authorized representatives, upon the presentation of credentials to:

- a. enter upon the permittee's premises where an effluent source is located or where any records are required to be kept under the terms and conditions of this permit;
- b. access and copy, at reasonable times, any records required to be kept under the terms and conditions of this permit;
- c. inspect, at reasonable times, any monitoring equipment or monitoring method required in this permit;
- d. inspect, at reasonable times, any collection, treatment, pollution management, or discharge facilities required under this permit; and
- e. sample, at reasonable times, any discharge of pollutants.

2. TRANSFER OF OWNERSHIP OR CONTROL OF FACILITIES

In the event of any change in ownership or control of facilities from which the authorized discharge emanates, the permit may be transferred to another person if:

- a. the permittee notifies the Department in writing, of the proposed transfer;
- b. a written agreement, indicating the specific date of proposed transfer of permit coverage and acknowledging responsibilities of current and new permittees for compliance with the liability for the terms and conditions of this permit, is submitted to the Department; and

- c. neither the current permittee nor the new permittee receive notification from the Department, within 30 calendar days, of intent to modify, revoke, reissue or terminate the existing permit.

3. REAPPLICATION FOR A PERMIT --[Reserved]

4. AVAILABILITY OF REPORTS

Except for data determined to be confidential under Section 308 of the Clean Water Act, 33 U.S.C. § 1318, all submitted data shall be available for public inspection at the offices of the Department and the Regional Administrator of the Environmental Protection Agency.

5. PERMIT MODIFICATION

A permit may be modified by the Department upon written request of the permittee and after notice and opportunity for a public hearing in accordance with and for the reasons set forth in 40 CFR § 122.62 and 122.63.

6. PERMIT MODIFICATION, SUSPENSION, OR REVOCATION

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked and reissued in whole or in part during its term for causes including, but not limited to, the following:

- a. violation of any terms or conditions of this permit;
- b. obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- d. a determination that the permitted discharge poses a threat to human health or welfare or to the environment and can only be regulated to acceptable levels by permit modification or termination.

7. TOXIC POLLUTANTS

If a toxic effluent standard or prohibition (including any schedule of compliance specified in such toxic effluent standard or prohibition) is established by the U.S. Environmental Protection Agency, or pursuant to Section 9-314 of the Environment Article, Annotated Code of Maryland, for a toxic pollutant which is present in the discharges authorized herein and such standard is more stringent than any limitation upon such pollutant in this permit, this permit shall be revoked and reissued or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified. Any effluent standard established in this case for a pollutant which is injurious to human health is effective and enforceable by the time set forth in the promulgated standard, even absent permit modification.

8. OIL AND HAZARDOUS SUBSTANCES PROHIBITED

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibility, liability, or penalties to which the permittee may be subject under Section 311 of the Clean Water Act (33 U.S.C. § 1321), or under the Annotated Code of Maryland.

9. CIVIL AND CRIMINAL LIABILITY

Except as provided in permit conditions on "bypassing," "upset," and "power failure," nothing in this permit shall be construed to preclude the institution of any legal action nor relieve the permittee from civil or criminal responsibilities and/or penalties for noncompliance with Title 9 of the Environment Article, Annotated Code of Maryland or any federal, local, or other State law or regulation.

10. PROPERTY RIGHTS/COMPLIANCE WITH OTHER REQUIREMENTS

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, State or local laws or regulations.

11. SEVERABILITY

The provisions of this permit are severable. If any provisions of this permit shall be held invalid for any reason, the remaining provisions shall remain in full force and effect. If the application of any provision of this permit to any circumstances is held invalid, its application to other circumstances shall not be affected.

12. WATER CONSTRUCTION AND OBSTRUCTION

This permit does not authorize the construction or placing of physical structures, facilities, or debris, or the undertaking of related activities in any waters of the State.

13. COMPLIANCE WITH WATER POLLUTION ABATEMENT STATUTES

The permittee shall comply at all times with the provisions of the Environment Article, Title 7, Subtitle 2 and Title 9, Subtitle 3 of the Annotated Code of Maryland and the Clean Water Act, 33 U.S.C. § 1251 et seq.

14. ACTION ON VIOLATIONS

The issue or reissue of this permit does not constitute a decision by the State not to proceed in administrative, civil, or criminal action for any violations of State law or regulations occurring before the issue or reissue of this permit, nor a waiver of the State's right to do so.

15. CIVIL PENALTIES FOR VIOLATIONS OF PERMIT CONDITIONS

In addition to civil penalties for violations of State water pollution control laws set forth in Section 9-342 of the Environment Article, Annotated Code of Maryland, the Clean Water Act provides that any person who violates Section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act or in a permit issued under Section 404 of the Act, is subject to a civil penalty not to exceed \$27,500 per day for each violation.

16. CRIMINAL PENALTIES FOR VIOLATIONS OF PERMIT CONDITIONS

In addition to criminal penalties for violations of State water pollution control laws set forth in Section 9-343 of the Environment Article, Annotated Code of Maryland, the Clean Water Act provides that:

- a. any person who negligently violates Section 301, 302, 306, 307, 308, 318, or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, or in a permit issued under Section 404 of the Act, is

subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one (1) year, or by both.

- b. any person who knowingly violates Section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, or in a permit issued under Section 404 of the Act, is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than three (3) years, or by both.
- c. any person who knowingly violates Section 301, 302, 306, 307, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, or in a permit issued under Section 404 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, is subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both.
- d. any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with or renders inaccurate any monitoring device or method required to be maintained under the Act, is subject to a fine of not more than \$10,000 or by imprisonment for not more than two (2) years, or by both.

17. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

18. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the Director shall be signed and certified as required by 40 CFR 122.22.

19. REOPENER CLAUSE FOR PERMITS

This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301, 304, and 307 of the Clean Water Act [33 USCS §§ 1311, 1314, 1317] if the effluent standard or limitation so issued or approved:

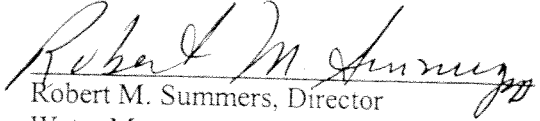
- a. contains different conditions or is otherwise more stringent than any effluent limitation in this permit or
- b. controls any pollutant not limited in this permit. This permit, as modified or reissued under this paragraph, shall also contain any other requirements of the Act then applicable.

D. AUTHORITY TO ISSUE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITS

On September 5, 1974, the Administrator of the U.S. Environmental Protection Agency approved the proposal submitted by the State of Maryland for the operation of a permit program for discharges into navigable waters pursuant to Section 402 of the Clean Water Act, 33 U.S.C. Section 1342.

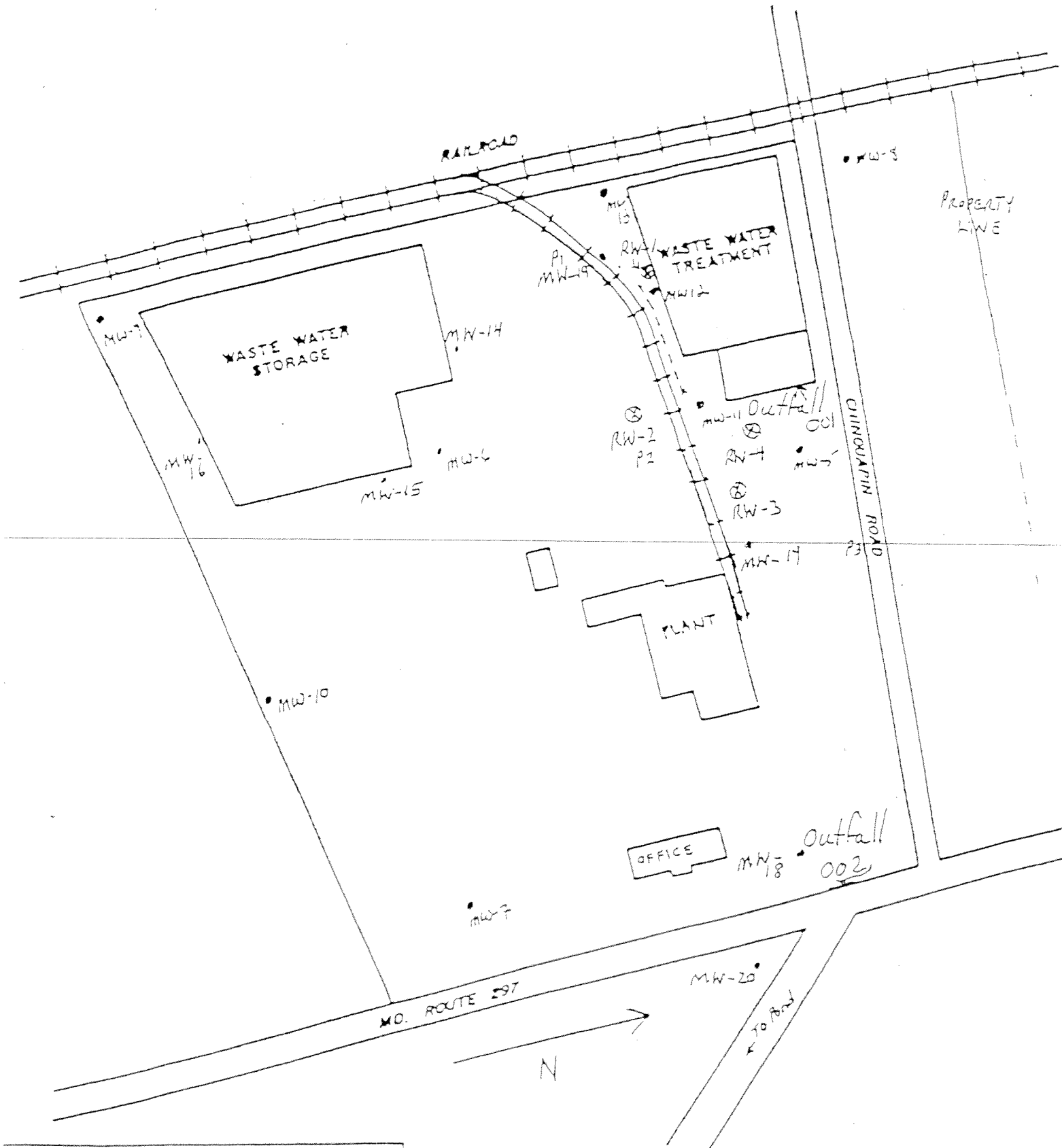
Pursuant to the aforementioned approval, this discharge permit is both a State of Maryland discharge permit and a NPDES permit.

This permit and the authorization to discharge shall expire at midnight on the expiration date. The permittee shall not discharge after that date unless a new application has been submitted to the Department in accordance with the renewal application provisions of this permit.


Robert M. Summers, Director
Water Management Administration

GROUNDWATER MONITORING SCHEDULE

Monitoring Well Location	Sampling Frequency: Base Neutrals	Sampling Frequency: Volatile Organic Compounds
MW-5	Semi-annual	Annual
MW-7	Annual	Annual
MW-8	Annual	Annual
MW-9	Annual	Annual
MW-10	Semi-Annual	Annual
MW-11	Semi-Annual	Annual
MW-12	Quarterly	Quarterly
MW-13	Quarterly	Annual
MW-14	Annual	Annual
MW-15	Quarterly	Annual
MW-16	Annual	Annual
MW-17	Annual	Annual
MW-18	Annual	Quarterly
MW-19	Quarterly	Quarterly
MW-20	Annual	Annual

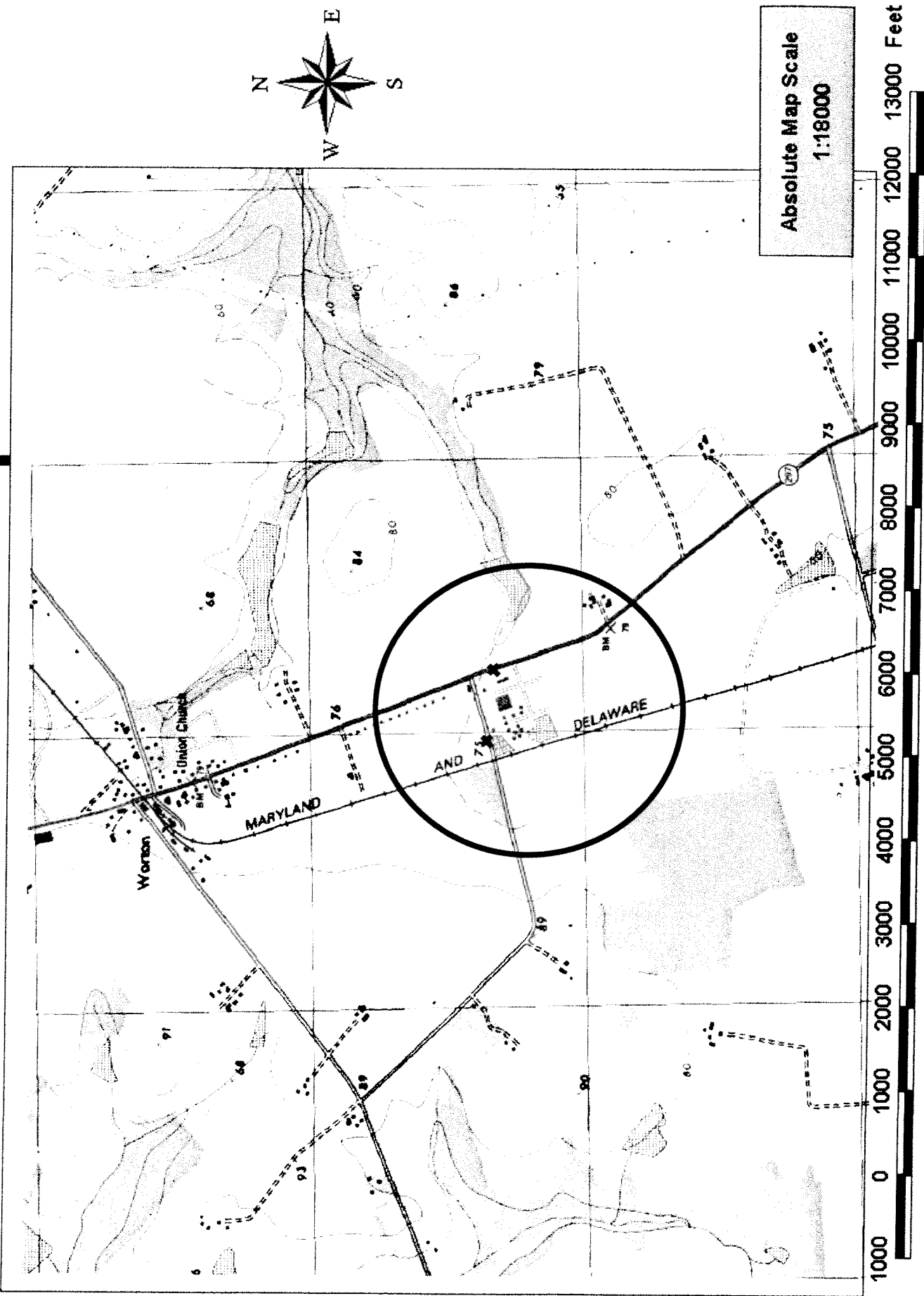


KEY

— a pond

VELSICOL CHEMICAL
 CORPORATION

Location Map



November 9, 2009

Correspondence Regarding Operating Permit



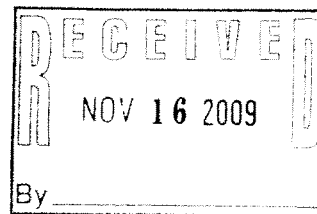
GENOVIQUE™

SPECIALTIES

10380 Worton Rd.

Chestertown, MD 21620

029-00001



CERTIFIED MAIL
RETURN RECEIPT REQUESTED

November 9, 2009

Ross Oliver
Maryland Department of the Environment
Air and Radiation Management Administration
Air Quality Permits Program
1800 Washington Blvd., Suite 715
Baltimore, MD 21230

Dear Mr. Oliver,

This letter provides notification to the department of Genovique Specialties Corporation's request to revise the facility's Permit-To-Operate, Permit No. 029-00001, with regard to Part E, Table E-2, Tanks and Ponds Associated with Wastewater Treatment and Fire Pond Protection.

Please remove Pond 316 from Table E-2. Pond 316's service as part of the facility's Wastewater Treatment System has been terminated, effective June 25, 2009.

Please let me know if you have any questions or require additional information. I can be contacted at 410-778-1991, ext. 252.

Sincerely,

Joanne K. Szymanski
Environmental, Health and Safety Manager

CC: Greg Franzoni, Maryland Department of the Environment, Air and Radiation Management Administration, Air Quality Compliance Program, Baltimore, MD